

HSR -2019

SUMMARY

CENTRAL PROVINCE

Ministry of Highways & Road Development
and Petroleum Resources Development
Sri Lanka

HSR Summary – 2019
(Central Province)

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ROAD DEVELOPMENT AUTHORITY - HSR. ANALYSIS (METRIC)
GENERAL NOTES

1. This **Highway Schedule of Rates (HSR.)** becomes operative from **01.01.2019**. HSR has given the maximum rates adoptable in the estimation of projects. In case, the resources are available at lesser rates depending on area and locality, the Engineer shall use such rates in the BOQ for the preparation of Estimates.
2. Basic prices of materials used to derive the rates in this schedule are considered with Nation Building Tax (NBT), but **without the Value Added Tax (VAT)**.
3. The rates are not included with overheads and profits component. For the purpose of preparation of Engineer's Estimates, these basic rates should be added with 20% for road works and 20% for bridge works. Provisions should be made separately in the estimate for the payment of **VAT**.
4. Work has to be carried out as per **(i) Standard Specifications for Construction & Maintenance of Roads and Bridges (S.S.C.M.)**, issued by the CIDA and **(ii) Road Maintenance Manual** issued by the RDA.
5. The description of all items in the bills shall briefly conform to that in the relevant items appearing in this schedule so as to avoid any ambiguity. Control of works, control of material and measuring & paying shall be carried out as per S.S.C.M. 104 to 106.6. However, where provision for control of traffic and safety measures for the road users are not included under such items, rate shall be provided separately and paid under the relevant HSR B0-704/B0-705 or on approved S.S.RR or on closely monitored work.
6. The basic labour rates given in this schedule are inclusive of 12% E.P.F., 3% E.T.F., and the special allowances ordered by the Government.
7. **For works under Force Account, in exceptional cases, Sk'A" labour at higher rates than that given in this schedule may be engaged on adhoc basis with the DG/RDA's prior approval and all inclusive daily rate shall not exceed Rs. 2500/= per 8 hour day. See Annex-V for net daily wages payable to labour.**
8. For items where cement and/or steel are used, the transport of same is included in the basic price. The rate of Emulsion per liter given in the HSR is exclusive of transport and shall be paid separately.
9. All cement to be used for Concrete, Structural and Masonry/Rendering work shall be of approved quality and shall conform to the specifications required by the Road Development Authority.
10. Materials from approved manufacturers only shall be used in all works (S.S.C.M. 1700). The borrow materials such as soil, aggregate and materials such as Bitumen binder etc. shall be subjected for quality assurance by sample checks during the construction as per S.S.C.M. 1602
11. **S.S.RR. and day work items** shall be approved by the Provincial Director, subject to the following conditions:
 - (a) Any **S.S.R.** where the amount of respective B.O.Q. item does not exceed Rs. **500,000/-**, irrespective of whether the S.S.R. is based on HSR, or not.
 - (b) All the **S.S.RR** and day work items, which are based on HSR, irrespective of the amount of B.O.Q. item, or as per directives issued by the Director General/R.D.A. during the year.
12. Concrete mixers should be used for mixing of all reinforced concrete or concrete specified by their Grade and in other concrete mixing exceeding 3 cu.m, unless otherwise directed. Weigh batch mixers shall be used for all concrete specified on Grade 25 and above.
13. In respect of all works involving improvements to existing roads, contractor shall control traffic as per S.S.C.M. 103.
14. Plant hire charges not included in the HSR could be obtained from RDA schedule of hire charges for Machinery & Equipment given as annex-1 or from Director/Mechanical. Otherwise procurement procedure as in General Notes Clause No. 18 should be followed. Hire charges given in this schedule are exclusive of overhead and profit component and taxes.
15. In the case of building construction works, rates in BSR-2019 prices prepared by the State Organizations on building construction, shall be adopted.
16. S.S.RR. approved with rates/prices applicable for a particular year, may be adopted for subsequent year/s where necessary, provided that only rates/prices are revised as applicable to the relevant year.

17. Materials available/recovered during execution of works:

All suitable earth, rock, steel or precast material and components available or recovered from road way excavations or demolition works shall be utilized in construction work with the approval of the Engineer and surplus disposed as directed. In the case of bridge re-construction works all bridge components such as steel girders, deck plates, and reinforcements etc., which are dismantled, shall be recovered and repaired for re-use. These items should be taken to an inventory by the Engineer and kept in stock under good care for reuse.

Separate items shall be included in the Estimates for reuse of such materials at recovery cost.

18. Procurement:

In cases where the resources have to be procured by tender procedure, the **Tender Committee shall take decisions** to make such awards according to the guide lines given in "**Procurement Manual/Procurement Guide Lines 2006 – Goods & Works**" and its subsequent amendments, issued by the **National Procurement Agency, Sri Lanka**.

a. All tender committees to procure materials for RDA work on works orders shall have a member from RDA authorized by the relevant Director/Provincial Director, and prior concurrence of the relevant Director/Provincial Director shall be obtained for the prices so decided before executing the work.

b. In case where Project Directors/ Provincial Directors procure materials at tender prices different to HSR or approve tender prices different to HSR fixed by other tender boards following government tender procedure as stated in above para, he shall take action to pay the contractor on prices approved by the tender board and amend / revise the relevant rates and the Estimates accordingly.

19. Payments under provisional sums:

"Provisional sum" means a sum included in the bill of quantities for the construction management services, execution of work, supply of goods/materials/ services or contingencies where the work items cannot be quantified accurately. The provisional sum amounts shall be included in the BOQ, by the **Engineer/Provincial Director** as per relevant assumptions on the matter and should be reasonable and justifiable respect to the site conditions and design requirements. This shall be executed in whole or in part or not at all at the direction and discretion of the Resident Engineer /Chief Engineer/Provincial Director. In case the provisional sum provided is not sufficient, funds allocated for contingencies item in the estimate shall be utilized to cover additional cost subject to the approval of the Provincial Director.

All such works, supplies, services or sub-contracts carried out by order of **Resident Engineer/Chief Engineer/Provincial Director** shall be valued at the relevant rates in the approved B.O.Q. or HSR if available. if the B.O.Q. or HSR does not contain any rates, then suitable S.S.RR or day works shall be agreed upon between Resident Engineer/Chief Engineer/Provincial Director and the contractor shall carry out work according to such approved S.S.RR.

20. Royalty/rental for materials mined:

Royalty/rental for approved borrow earth and aggregate materials mined from state land/private land shall be reimbursed **without overheads** to the contractor, on confirmation of the payment of royalty/rental by the Provincial Director of the relevant area where the mining is being executed. Royalty/rental rate shall not be more than the rate approved by the Government Agent/Divisional Secretary of the relevant area. In case the materials cannot be mined from state lands, government procurement procedure shall be followed as given in the General Notes **Clause No.18**.

21. Prior to preparation of the BOQ, suitable borrow pits shall be identified at locations as close as possible for economical transport and to the required quality, by the Resident Engineer/Chief Engineer//Provincial Director and transport distance shall be included accordingly in the BOQ and Estimates.

22. a. For any price variations other than works carried out on works orders, use the **ICTAD** formula guidelines and indices. **December 2018** shall be considered as the **base month** for computation of fluctuations. **However for contracts/work below Rs 2.0 million, payment on price variations shall not be considered.** Clause **22 b**, applies for works carried out on work orders.

b. If there is a change of ex-factory/manufacture's or ware- house price of different brands of cements, considered in the build-up of **basic price of cement** in the HSR, Director/ Provincial Director shall amend the basic price of cement after verification and pay on approved SSR. Similar procedure to be followed in case of **price changes in reinforcement steel & Bitumen**.

23. **Transport**

Note:

1. The rates for "transport" include all modes of transport up to a maximum distance of the stipulated range.
2. The most economical mode of transport shall be always adopted. In transporting materials (soil, sand, aggregate and rubble), if the average output of the transport vehicles cannot be achieved due to unavoidable delays or any other reason justifiable and acceptable to the **Chief Engineer/Provincial Director**. The rate of payment for transport shall be made under any relevant item selected from codes **T1-001 to T1-003b** irrespective of the type of vehicles to be used. However in case the quantity involved is more than 200 cu.m. per kilometer run and in situations other than stipulated in para above, the rate of payment for transport shall be selected from item codes **T1-006** or **T1-007** or **T1-007a** in the schedule whichever is relevant, For transport of plant made Premix, rate shall be as per item **T1-009**.
3. Transport of aggregate, soil, Emulsion and Premix materials **shall always be paid separately** unless otherwise directed.
4. Rate for rubble transport up to 3 km may be selected from item codes **T1-002** to **T1-003b** supported with justifiable reasons.

24. **Excavation** (S.S.C.M. 301 - 303)

Note:

1. a. **Manual rates:**

The rates given in this schedule if not otherwise stated are intended for manual excavation.

b. **Bulk rate:**

In the case of borrow earth supply where the estimated quantity **exceeds 300 cu. m** (for the whole project), the rates given under **B0-201, B0-202** or item codes **EW1-013 & EW1-014** shall be adopted. Similarly for Roadway **Excavations with quantities more than 300 cu.m.**, rates given under item codes **E1-027, E1-028 and E1-029** shall be adopted. When deviation from above rates is necessary, payment shall be made on approved S.S.RR. Based on actual site records (machine hours) or on work-studies carried out under close supervision by the Engineer, after obtaining approval of the Technical Committee.

2. The rates include for excavation and loading or depositing up to 25 meters. Transport of excavated material more than 25 meters shall always be paid separately unless otherwise directed. In case of foundation excavation for structures, backfilling and compaction to be considered separately unless otherwise specified
3. Additional excavation required for working space shall be decided by the Engineer and shall be paid at the same rate applicable to the item.
4. Soils are generally classified as in the Standard Specifications. (S.S.C.M. 301.2)
5. Construction of cofferdams that are necessary shall be paid separately. (S.S.C.M. 302(6)). Rates under items **ST1-018, ST1-019 & ST1-020 are not applicable for bridge construction work**. For bridge works, it shall be payable on S.S.RR based on closely monitored work-studies or on day works at HSR/machine hours, depending on the site conditions.
6. De-watering necessary for cofferdams shall be paid separately. (S.S.C.M. 302(6)).
7. Rates under items **E1-011 to E1-019** are not applicable for the excavation for **foundations of bridge structures**. Payment for such excavations shall be made on approved S.S.RR based on closely monitored work-studies or on day works at HSR/machine hours, depending on the site conditions.
8. Trench excavation for utility services and reinstatement shall be according to S.S.C.M. 305 and shall be read in conjunction with the procedures to be followed by agencies when trenching highways. Under no circumstances pedestrians and traffic using the road shall be allowed to suffer or inconvenienced due to trenching work, adequate notice have to be given to the public and necessary safety precautions have to be taken in advance.

25. **Aggregate/rubble (including loading & piling)**

Note:

1. Except where otherwise stated, the rates include preparing depots, loading and piling.
2. The rates for items B0-302 to B0-313 include the cost of blasting materials.
3. In exceptional cases such as limestone, "dug out" aggregate, special rates for items B0-302 to B0-313 shall be approved by the Provincial Director.

4. Transport of aggregate and rubble not included in the rates shall be paid separately.
5. Blasting operations shall be carried out as recommended in S.S.C.M. 306 and all works in blasting operations shall conform to the guidelines given in the National Environmental Act No. 47 of 1980 and any subsequent amendments.
6. Prior approval shall be obtained from the Provincial Director for the use of 19 mm hand broken aggregate.

26. Earth filling & compaction (S.S.C.M. 304, 400 & 600)

Note:

1. Approved soil that is piled shall be spread, watered and well compacted by rolling as per Standard Specifications.
2. The rates for earth compaction include the cost of watering.
3. In the case of force account works, where the royalty or similar payments has to be paid for gravel, earth, clay, turf, etc., a claim shall be prepared separately for approval of the Provincial Director, subject to the conditions given under the **Clause 20 of the General Notes**. In case of works awarded on tender rates, the royalty is deemed to be included into the rates.
4. Rates given for the items EW1-003, EW1-004, EW1-005, EW1-006, EW1-007, EW1-008 and EW1-009 on loose volume are for the work where the % density is not specified. If the rates are to be decided on compacted volume basis, the rate for loose volume shall be adjusted by multiplying the specified factor corresponding to the required % density by the factor given in table below.

% Density	Factor
1. For standard density not less than 95 %	1.35
2. For standard density not less than 100 %	1.42

For rates on other densities, S.S.RR. should be approved by the Provincial Director.

5. Transport of water beyond 25 Meters shall be paid separately.
6. (i) The normal output of earth compaction per day will be 66 Cubic Meters using 8-10 ton Road Roller.
(ii) For earthworks in widening of existing roads where the average width is less than 1.5 meters, the output of earth compaction using 8-10 ton Roller shall be considered as 50 Cubic Meters per day.
7. Use of small compaction equipment shall be allowed only if the space is restricted for operating 10-ton Road Rollers or equivalent.

27. Rubble paving (rip rap protection - S.S.C.M. 804)

1. P1-001 to P1-004 does not include the cost of rubble, which shall be paid for separately. The coverage rates of paving are as follows:
 - (i) For pitch paving 225 mm thick 0.26 cu.m. of rubble per square Meter.
 - (ii) For pitch paving 150 mm thick 0.17 cu.m. of rubble per square Meter.
 - (iii) For flat paving 225 mm thick 0.21 cu.m. rubble per square Meter.
 - (iv) For flat paving 150 mm thick 0.15 cu.m. rubble for square Meter.
2. Rubble/rip rap paving shall be carried out to avoid damages by watercourses, slips, and slides to road embankments. Action shall be taken to include this item to routine/periodic maintenance flood damage items.

28. Aggregate Compaction (S.S.C.M. 403 - 408)

1. The normal coverage areas shall be as follows:
 - (i) For paved roads scarified for full width and for strip metaling 14.5 to 19.7 sq.m. shall be compacted with 1 cu.m. of new 50 mm aggregate.
 - (ii) For construction of new bases and for edge correction 100 sq.m. shall be compacted with 8.5 - 10.0 cu.m. of new 50 mm aggregate spread in two layers to 100 mm loose thickness.
2. Edge correction shall be 0.6 m (approx.) in width and edge strengthening shall be 1.2 m (approx.) in width, using 100, 50 & 19 mm aggregate conforming to S.S.C.M. 1103.
3. Strip metaling shall be considered only when the surface sections to be metaled are in narrow strips less than 1.2 m in width.
4. For construction of new bases, where aggregate compaction of the 19-mm and 50 mm is required 1.0 cu.m. of 19 mm aggregate is adequate for compacting with 10 cu.m. of 50 mm.
5. The normal quantities of aggregate that shall be compacted per day are as follows:
 - (i) For full width of paved road including scarifying and/or hand picking the surface will be, 12.75 cu.m. of new aggregate per day.
 - (ii) For construction of new bases, 23.5 cu.m. of new aggregate per day.
 - (iii) For strip or edge correction including loading scarifying and/or handpicking the surface, 9.90 cu.m per day.
6. The average rate of travelling of Oil/Diesel Roller is 20 km per day.
7. The rates for items M1-001, M1-004 & M1-007 to M1-013 include the necessary re-transport of aggregate and no further re-transport costs shall be paid.
8. The actual scarified area (which is not necessarily the Bitumen surfaced area) shall be paid for in items M1-002 & M1-003. Normally 0.3 m width (approx.) shall be reckoned as requiring scarifying for edge correction.
9. Tempering and sharpening of scarifier tines are included in the rates for item M1-003 and shall not be paid for separately.
10. The rates for aggregate compaction include the cost of watering.
11. Transport of water beyond 25 Meters shall be paid separately.

29. Road surface treatment (S.S.C.M. 501 - 507)

1. The various Grades of Bitumen generally used for road works shall be as stipulated in the standard specifications.
2. The rates for Bitumen in surfacing include cost of Bitumen firewood/fuel and blinding materials. Transport of blinding materials exceeding 16 km shall be paid for separately. One cu.m. of blinding material is allowable for 125 sq.m. of Bitumen surfacing.
3. The rates include the cost of internal transport of Bitumen up to 16 km from contractors yard.
4. Approved sand shall be used for blinding.
5. The aggregate quantities and binder required per sq. Meter of **D.B.S.T** or **S.B.S.T** work shall be as per the **tables 505-1 or 505-3 of the S.S.C.M.** depending on the method adopted. The application rates specified shall always be included in the description of the BOQ item for **D.B.S.T** or **S.B.S.T**.
6. In case of force account works, the Officer in-Charge shall study the average consumption per sq.m. obtained by dividing the actual quantity of Bitumen used, in liters, by the area treated in sq.m. for first/subsequent coat Bitumen surfacing. The Engineer approving the item shall, after satisfying himself that the quantities claimed are reasonable and within the limits specified in the HSR, approve the quantities accounted for. If the quantities are outside the specified limits, the approval of the Provincial Director should be obtained.

7. Cost of Binder and cover aggregate for seal coat treatment work shall be paid separately **only if specified**.
8. The basic rates for the Asphalt Concrete items **B0-361A, B0-362 and B0-362A** have been worked out taking 60/70 Penetration grade bitumen as the binder. For item **B0-365**, it is worked out with Cut-Back of 60/70 penetration grade Bitumen and for item **B0-366**, it is Bitumen Emulsion CSS-1. % Binder content used for different types of Asphalt Concrete is based on generally accepted mix designs specific to the plant location recommended by the R&D division of the RDA.

Different Bitumen penetration grades and or different binder contents may be specified for the asphalt concrete mixes for special cases. Then approved binder Type and the content as a % shall be included in the description of the item in such variations.

9. (i) **Densities of Asphalt Premix in compacted state** for general estimation purposes shall be as follows.
 - a. **Wearing Course 2.450 m.t. per cu.m.**
 - b. **Binder Course 2.430 m.t. per cu.m.**

For actual payments, design densities shall be adopted.

(ii) Average density of Asphalt Premix in loose state shall be assumed as **1.48 m.ton per cu.m.**

10. The quantity of aggregate necessary for the production of 1 metric ton of Asphalt Premix (average for all six types considered in the HSR) by plant shall be taken as **0.6270 cubic meters**.
 11. The transport of aggregate for the production of Premix shall be paid separately and shall be decided according to the location of the mixing plant.
 12. The transport of Emulsion CSS-1 for the production of cold mix by plant shall be added to the rate per metric ton and shall be decided according to the location of the mixing plant. 59.17 liters of Emulsion CSS-1 are required for each metric ton of cold mix.
- 30. Road surface maintenance (S.S.C.M. 1100 - 1102)**
1. Where method of patching per half a kilometer is adopted, the quantity of Bitumen per half a kilometer per month approved in the routine Maintenance Estimates, may be increased or decreased when necessary. But the rate payable to the contractor for the monthly maintenance of the road surface per half kilometer shall be the rate approved for that half kilometer by the Chief Engineer at the commencement of the Financial Year. The actual rate payable for patching with Bitumen will be according to the appropriate items.
 2. All roads/sections of roads in the district for which 14, 21, 28, etc. liters per half kilometer per month have been approved shall be listed under groups 1,2, 3, etc., respectively in a schedule of roads, which will be approved by Chief Engineer, and shall become an attachment of the HSR after **Section xiv**.
 3. If during the course of the year, there is considerable variation between the estimated quantity of Bitumen per half a kilometer per month and quantity actually used in respect of any road or section of road, the Executive Engineer will examine the reasons therefore and seek the Chief Engineer's approval to amend the rate payable for Bitumen patching of that road or section of road during the same and/or subsequent Financial Year and amend the schedule referred to in **General Note 30 Item 2.**, above.
 4. The prior approval of the Chief Engineer should be obtained for extensive patching. Where extensive patching is carried out, no payment should be made for normal patching on the same half kilometer in the same month.
- 31. Patch sealing : (S.S.C.M. 1104)**
- Where the road surface shows signs of deficiency of Bitumen and pitted with numerous potholes, patch sealing shall be adopted.
- 32. Road side and drainage systems (S.S.C.M. 701 - 707, 1302)**
1. The rates exclude the cost of loading, unloading and transporting but include spreading suitably in the vicinity unless otherwise directed.
 2. Culvert inlets and outlets should be cleaned before and after the rains.
 3. For cleaning choked culverts (item DR1-012) with head room/diameter less than 1 meter, day works rates shall be adopted.
 4. Drains should be cleared before commencing any types of surfacing (S.S.C.M. 501 - 507).

33. Bridges, culverts, retaining walls, etc. (S.S.C.M. 1001 - 1010)

Note:

1. Concrete work

- i. The cost of shuttering is not included in the rates, and shall be paid separately.
 - ii. The cost of hire charge for concrete mixer is included in the rates for concrete 'using mixers'.
 - iii. Construction of necessary cofferdams, shoring, forming islands and de-watering shall be paid separately.
 - iv. For all concrete with 19mm aggregate, crusher plant materials shall be used unless otherwise directed.
2. Only sand of approved quality shall be used for cement mixes, mortars & concretes.
 3. The rates include the cost of transport up to 25 meters on level ground in the relevant items. Any vertical transport required in excess of first 1.5 meters upwards or down wards shall be separately considered.
 4. Transport of water beyond 25 meters shall be paid separately.
 5. Extra payment for scaffolding/staging where necessary is allowable if not included in the rate.
 6. To obtain the nominal mix of cement concrete 1:2:4 (19mm); batching of materials in the field under average conditions will be in the proportions 1:2 1/2:4 by volume. Cement concrete 1:3:6 (37.5 mm) and cement concrete 1:4:8 (50mm) may continue to be batched by volume in the specified nominal proportions; cement should be by bags of 50 kg. and bags shall be deemed to be 0.035 cu. m. in volume.
 7. The quantities of the various materials for cement concrete and cement mortars required to yield an average workable mix shall be as follows.

Description	Proportion [nominal mix] or Grade	Yield Unit	Cement in 50 kg	Sand (cu.m)	Aggregate /rubble (cu.m)
1. Cement concrete	g 40(19 mm)	cu.m	9.87*	0.6*	0.91*
2. Cement concrete	g 30(19 mm)	cu.m	8.17*	0.6*	0.90*
3. Cement concrete	g 25(19 mm)	cu.m	6.35*	0.6*	0.90*
4. Cement concrete	g 25(37.5mm+19mm) 70% 30%	cu.m	5.86*	0.6*	37.5=0.54* 19.0=0.24*
5. Cement concrete	g 20(19 mm)	cu.m	6.04*	0.53*	0.79*
6. Cement concrete	1:1 1/2 :3(19 mm)	cu.m	8.12	0.60	0.91
7. Cement concrete	1:2:4 (19 mm)	cu.m	5.65	0.60	0.90
8. Cement concrete	1:2:4 (37.5 mm)	cu.m	5.65	0.60	1.00
9. Cement concrete	1:3:6 (19 mm)	cu.m	4.38	0.60	0.91
10. Cement concrete	1:3:6(37.5 mm)	cu.m	4.38	0.60	1.00
11. Cement concrete	1:4:8(50 mm)	cu.m	3.18	0.60	1.00
12. 12.5mm Cement render	1:2 mix	sq.m	0.15#	0.013	-
13. 19.0mm Cement render	1:2 mix	sq.m	0.23#	0.020	-
14. 12.5mm Cement render	1:3 mix	sq.m	0.12#	0.016	-
15. 19.0mm Cement render	1:3 mix	sq.m	0.19#	0.024	-
16. Random Rubble masonry in cement/sand mortar	1:6 mix	cu.m	1.77	0.40	1.10

In items 12 - 15 the cement quantity is exclusive of that required for smoothing where necessary.

* The above mix proportions for Grade concrete are given for estimation purposes. The actual proportions for Grade concrete shall be decided by mix designs at site and the rates shall be adjusted with the approval of the Provincial Director.

8. Ready mixed concrete:

Ready mix concrete shall be used only on the written approval of the Director/Provincial Director and for the procurement of the material government tender procedure as given under **General Notes Clause No. 18** to be followed. The contractor for ready mix concrete shall be a copious supplier having minimum of one year experience of supplying ready mix concrete to projects acceptable to the tender board and shall have sufficient transport & pumping facilities, laboratory facilities for quality control and a qualified staff.

9. Wedge stones shall mean stones that are wedged and squared on one face and roughly dressed on the other five faces to enable them to be laid in courses.

10. Wearing surface for R.C.C/P.C.C decking (S.S.C.M. 1403)

Generally for 74.5 sq.m. of **50 mm. thick compacted wearing surface**, the quantities of material required will be 3.5 cu.m. 19 mm to 3.2 mm. Graded aggregate, 2.3 cu.m. sand and 381 liters Bitumen and 91 liters of kerosene. If Emulsion is used, the quantity of material required is 500 liters of Emulsion and 273 liters of water.

11. Concrete pipe culverts (S.S.C.M. 1403)

- i. The diameter of pipes indicated refers to the internal diameter.
- ii. The rates include the cost of pipe, collars, rolling up to a distance of 25 m & lowering to bed up to 1.8 Meter depth, aligning and fixing.
- iii. Excavation and backfilling of trench is not included in the rates unless otherwise mentioned.

34. Labour, plant and materials

1. All labour, plant, equipment and materials have to be provided by the contractor.
2. **The Engineer should maintain performance records of all types of machinery for future reference.**

35. Day works

1. **Day works shall be defined and adopted by the Engineer under exceptional circumstances.**
2. Labour rates fixed under **section xiv of the HSR (Surveying, Leveling and Day works)** shall be used in pricing day works. **In cases of very special labour**, such as skin divers etc., procurement of same shall be as per **General Notes clause 18**.
3. Rate for materials in day works shall be the **purchase price subject to the condition that procurement of same is done as per General Notes Clause No.18**.
4. It is necessary that **appropriate plant is used** and **works are programmed to minimize the costs to the satisfaction of the Engineer**.

36. Maintenance of road signs and markings: (S.S.C.M. 1501-1502)

All traffic signs, kerbs, parapets, guardrails, barricading and k.m. posts should be painted at least once a year unless otherwise directed by the Engineer.

37. Quality control work: (S.S.C.M. 1600)

- a. **The Engineer is responsible for carrying out tests on all works before recommending for payments and maintenance of records. In case of dispute, it may be referred to Provincial Director. /Director (R & D) for a final decision. (S.S.C.M. 1602)**
- b. **Special attention should be made to control the alignment, thickness and surface regularities of pavement layers as per section 1601 of the S.S.C.M. using geodetic levels, camber boards and 3-Meter straight edges.**

38. Piece rates and allowances:

The amounts allowed for the items under "piece rates and allowances" are the anticipated basic costs to cover the expenses to be incurred, during the execution of the work.

39. Labour Inputs

The labour inputs shown against the work items in this schedule do not include the Plant and Equipment Operator costs which are deemed to have been covered under the hire charges of the Plant and Equipment.

40. HSR Analysis is for internal use only. It cannot be produced in Court of Law as reference/authority and thus is a privilege document.

HSR - 2019
Engineering Division
Ministry of Highways & Road Development
and Petroleum Resources Development

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Engineering Division
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H.S.R. - SCHEDULE OF INPUTS FOR THE YEAR 2019
CENTRAL PROVINCE

CODE

UNIT

PRICE(RS.)

LABOUR RATES (BASIC)

B0-001	SKILLED A - (SK 'A') * (Welders, Electricians, Carpenters, Masons, Miners, Painters, Hwy/Mach Operators, Ch.Hand)	DAY (8 HRS)	2,500.00
B0-002	SKILLED B - (SK 'B')	DAY (8 HRS)	2,200.00
B0-003	SEMI SKILLED - (S/SK)	DAY (8 HRS)	1,800.00
B0-004	UNSKILLED - (U/SK)	DAY (8 HRS)	1,650.00

* **Note:** For works under Force Account **in exceptional cases, Sk'A' labour** at higher rates than above may be engaged on **adhoc basis** with **DG/RDA's prior approval and the daily wage shall not exceed Rs. 2500/= per 8 hour day.** See General Notes **Section 6.**

HIRE CHARGES (WET LEASE BASIS - INCLUDING OPERATOR UNLESS OTHERWISE))

B0-101	TAR BOILER(HEATING WITH FIREWOOD)(Less Operator)#	DAY (8 HRS)	88.06
B0-102	CONCRETE / ASPHALT MIXER (400 LTRS)	DAY (8 HRS)	7,338.62
B0-103	BITUMEN SPRAYER (Less Operator)#	DAY (8 HRS)	92.24
B0-104	WATER TANK + 50 MM. PUMP(Less Operator) #	DAY (8 HRS)	1,252.76
B0-105	WELDING PLANT ENGIN DRIVEN: WITH WELDER	DAY (8 HRS)	14,395.94
B0-106	PORKER VIBRATER (Less Operator)	DAY (8 HRS)	2,162.26
B0-107	PLATE COMPACTOR (90 KG)(Less Operator)	DAY (8 HRS)	4,106.83
B0-108	VIBRATING RAMMER (60 KG)(Less Operator)	DAY (8 HRS)	3,928.91
B0-109	VIBRATING ROLLER (1/2 - 1 Ton)	DAY (8 HRS)	6,902.84
B0-110	VIBRATING ROLLER (SMOOTH-10 TONS)	DAY (8 HRS)	33,871.17
B0-111	SMOOTH/ROAD ROLLER (8 -10 TONS:STATIC)	DAY (8 HRS)	12,258.49
B0-112	PNEUMATIC ROAD ROLLER (8 - 10 TONS)	HOURL	4,181.09
B0-113	MOTOR GRADER (65 HP)	DAY (8 HRS)	27,401.49
B0-114	MOTOR GRADER (120 -140 HP)	DAY (8 HRS)	57,126.29
B0-115	BACKHOE LOADER (JCB)	DAY (8 HRS)	26,453.01
B0-116	WHEEL LOADER (1.4 CU,M)	DAY (8 HRS)	29,735.30
B0-116A	WHEEL LOADER (1.7 CU,M)	DAY (8 HRS)	35,708.95
B0-117	TRACTOR & TRAILOR (3T)	DAY(8 HRS)	6,533.29
B0-118	MATERIAL TRANSPORT BY LORRY/TIPPER/DT (EXCEEDING 10 KM DISTANCES).	KM/CU.M.	26.18
B0-118A	-Do- BY HIRED LORRY/TIPPER/DT (EXCEEDING 10 KM DISTANCES).	KM/CU.M.	24.53
B0-119	-Do- BY LORRY/TIPPER/DT ((FOR MORE THAN 3 KM LESS THAN 10 KM. DISTANCES)	KM/CU.M.	29.72
B0-119A	-Do- BY HIRED LORRY/TIPPER/DT (FOR MORE THAN 3 KM LESS THAN 10 KM. DISTANCES)	KM/CU.M.	27.88
B0-120	TRANSPORT OF PREMIX BY DUMP TRUCK	KM/M.TONNE	18.89
B0-120A	-Do- EMULSION PER 100 LITERS PER 1 KM	KM/100 LTRS	3.79
B0-120B	-Do- PREMIX BY HIRED DUMP TRUCK	KM/M.TONNE	17.71
B0-121	SAND/CHIP SPREADER - PROPELLED	DAY (8 HRS)	42,550.42
B0-121A	SAND/CHIP SPREADER - TOWED	DAY (8 HRS)	2,533.53
B0-122	FARM TRACTOR & BROOM	DAY (8 HRS)	11,667.69
B0-123	EMULSION SPRAYER SELF PROP. (4000 LITRES)	DAY (8 HRS)	26,646.75
B0-124	WHEEL LOADER (2.7 - 3.1 CU.M)	DAY (8 HRS)	50,638.58
B0-124A	WHEEL LOADER (2.0 - 2.3 CU.M)	DAY (8 HRS)	44,315.06
B0-125	LORRY 3 TON(2.5 CU.M) *	KM	43.52
B0-126	LORRY 5 TON(3.5 CU.M) *	KM	54.70
B0-127	LORRY 7 TON(4.5 CU.M) *	KM	63.42
B0-128	WATER BOWSER (6000 LITRES)	DAY (8 HRS)	21,604.90
B0-129	ASPHALT PAVER (Crawler)	HOURL	7,883.88
B0-129A	ASPHALT PAVER (Wheel)	HOURL	8,761.35
B0-130	TANKER ONLY(20,000 LITRES)	HOURL	311.85
B0-130A	LOW BED TRAILER 30 TONS *	KM	57.85
B0-131	PRIME MOVER OLD (FOR 20,000 L TANKER)	HOURL	3,757.23
B0-131A	PRIME MOVER NEW (FOR 30 T TRAILER) TIME BASIS	HOURL	5,958.18
B0-131B	PRIME MOVER NEW (FOR 30 TON TRAILER) DISTANCE BASIS *	KM	270.83
B0-132	BABY DUMPER .75 cu.m (less Operator)	HOURL	1,272.82
B0-133	WATER PUMP 4"	HOURL	1,191.69
B0-133A	WATER PUMP 2" (less Operator)	HOURL	269.19
B0-134	SLUDGE PUMP 4"	HOURL	1,594.46
B0-135	VIBRATING ROLLER (6 -7 TONS) TANDEM	HOURL	2,611.45
B0-136	CONCRETE MIXER WITH LOAD CELL WEIGH BATCHER 14/10	DAY (8 HRS)	12,026.99
B0-137	TROLLEY EMULSION (less Operator)	HOURL	114.77
B0-138	SPRAYER EMULSION HAND CART	HOURL	823.11
B0-139	ROAD MARKER HAND CART GAS HEATER	HOURL	1,628.46
B0-140	BITUMEN DISTRIBUTOR 750 LITRES	HOURL	1,701.83
B0-141	TANK TRUCK BITUMEN 10000 LTR	HOURL	4,485.78
B0-142	CRUSHER STONE 40T/H	HOURL	11,552.03
B0-143	TRACK DRILL CRAWLER	HOURL	1,808.50
B0-144	COMPRESSOR AIR 750 CFM	HOURL	6,743.29
B0-145	SLURRY SEALING MACHINE	HOURL	13,457.93
B0-146	MOBILE CRANE 25 TONS	HOURL	8,400.97
B0-146A	MOBILE CRANE 30 TONS	HOURL	10,615.00
B0-147	ASPHALT PLANT 60T/H HOT MIX	HOURL	20,792.27
B0-147A	COLD MIX PLANT 30 T/H	HOURL	10,721.89
B0-148	LORRY 10 TON *	KM	99.60
B0-149	PICKUP TRUCK 2WD *	KM	27.24
B0-150	FARM TRACTOR WITH WATER BOWSER	HOURL	817.03
B0-151	LORRY 17 TON SELF LOADING(WET) *	KM	174.28

H.S.R. - SCHEDULE OF INPUTS FOR THE YEAR 2019
CENTRAL PROVINCE

CODE **UNIT** **PRICE(RS.)**

HIRE CHARGES (WET LEASE BASIS - INCLUDING OPERATOR UNLESS OTHERWISE)(Continued)

B0-152	TRACTOR WITH EMULSION BOWSER	HOUR	827.33
B0-153	EMULSION TANK TRUCK (8000 LITRES) *	KM	135.66
B0-154	DOZER(CRAWLER TRACTOR) D-4,D-41(80-100 HP)	HOUR	4,617.88
B0-155	EXCAVATOR MOBILE	HOUR	6,798.13
B0-156	AIR COMPRESSOR 250 CFM	HOUR	2,619.54
B0-157	HAND HELD BREAKER / DEMOLISHER (Less Operator)	DAY	506.65
B0-158	ROCK DRILL HAND HELD (LESS DRILL STEEL)	HOUR	296.17

* Cost of return trip not considered under this rate

**SUPPLY OF SOIL FROM BORROW PITS INCLUDING
LOADING.(FOR QUANTITIES MORE THAN 300 CU.M.)**

* SEE GENERAL NOTES FOR FURTHER DETAILS ON USING THIS RATE

B0-201	APPROVED SOIL TYPE I & II FOR SUB BASES & SHOULDERS	CU.M	412.25
B0-202	APPROVED SOIL TYPE I & II FOR EMBANKMENTS	CU.M	288.57

**AGGREGATE & RUBBLE (EX-QUARRY - BASIC)
INCLUDING BLASTING, LOADING & PILING**

NOTE * (ROYALTY / RENTAL TO BE ADDED SEPARATELY IN THE BOQ WITHOUT
ADDING OVERHEADS, IF REQUIRED TO BE REIMBURSED.)

B0-301	(150MM - 225MM) RUBBLE - (VEHICLE MEASUREMENT, EXCLUDING PILING)	CU.M	1,201.41
B0-302	(150MM - 225MM) RUBBLE PILED	CU.M	2,143.20

MANUAL PRODUCTION

B0-303	(100MM) AGGREGATE	CU.M	2,250.36
B0-304	(75MM) AGGREGATE	CU.M	2,303.94
B0-305	(50MM) AGGREGATE	CU.M	2,357.52

PLANT PRODUCTION

B0-308A	(19MM) AGGREGATE	CU.M	4,990.99
B0-309	(12.5MM) AGGREGATE	CU.M	4,180.09
B0-310	(37.5MM) - DO - , (S.S.C.M. TB : 1701-1 / 1701-4)	CU.M	4,900.00
B0-311	(50MM) - DO - , (S.S.C.M. TB : 1701-4)	CU.M	4,300.00
B0-312	CRUSHER FINES (6.3MM. DOWN WARDS)	CU.M	1,333.92
B0-313	(37.5MM) GRADED (TABLE 1701.5 FOR ABC)	CU.M	2,208.48

AGGREGATE FOR SEAL COAT TREATMENTS

(GRADING AS PER SSCM TABLE 1701-8)

B0-314	AGGREGATE 19 MM	CU.M	4,990.99
B0-315	AGGREGATE 12.5 MM	CU.M	4,180.09
B0-316	AGGREGATE 9.5 MM	CU.M	4,180.09

**SAND (RATE TO INCLUDE TRANSPORT UP TO 16 KM.)
(ADDITIONAL TRANSPORT TO BE PAID SEPARATELY)**

B0-331	RIVER SAND FOR ROAD SURFACE APPLICATIONS (SSCM TABLE 1701-9)	CU.M	5,675.38
B0-332	RIVER SAND FOR CONCRETE AND MASONRY WORK (SSCM TABLE 1701-2)	CU.M	5,675.38

BRICKS (WITHOUT TRANSPORT)

B0-340	COMMON BURNT CLAY BUILDING BRICKS (SLS 39:1978)	1000 NOS.	14,166.67
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H.S.R. - SCHEDULE OF INPUTS FOR THE YEAR 2019
CENTRAL PROVINCE

CODE		UNIT	PRICE(RS.)
BITUMEN & EMULSION			
(TRANSPORT TO BE ADDED SEPARATELY)			
B0-351	BITUMEN 80/100 *[DRUMS] (Purchases>25 drums)	LITRE	86.00
B0-351A	BITUMEN 60/70[DRUMS] (Purchases>25 drums)	LITRE	86.00
B0-352	EMULSION - C.S.S. 1* (EXCLUDING TRANSP.)	LITRE	77.70
B0-353	EMULSION - C.R.S. 1* (EXCLUDING TRANSP.)	LITRE	75.50
B0-354	EMULSION - C.R.S. 2 * (EXCLUDING TRANSP.)	LITRE	80.25
B0-355	BITUMEN 80/100 * [BULK] [with De-cant cost]	KG	89.31
B0-355A	BITUMEN 60/70 [BULK][with De-cant cost]	KG	89.31
B0-355B	BITUMEN 80/100* [BULK]	KG	86.00
B0-355C	BITUMEN 60/70 [BULK]	KG	86.00
B0-356	CUTBACK BITUMEN MC-30	LITRE	107.05

PREMIXED BITUMINOUS MATERIALS
(PRICE INCLUSIVE OF ALL RAW MATERIAL TRANSPORT AND ROYALTY ON AGGREGATE)

* ASPHALT COLD MIXING PLANTS ARE NOT AVAILABLE WITHIN THE PROVINCE. USE THE EX-PLANT BASIC PRICES SELECTED FROM THE TABLE GIVEN ON **PAGE 172**, RELEVANT TO THE MIXING PLANT CLOSEST TO THE SITE, DEPENDING ON THE AVAILABILITY OF THE REQUIRED TYPE AND THE MOST ECONOMICAL RATE WITH TRANSPORT.

(FOR PROJECT USE)-

B0-361A	ASPHALT CONCRETE: SURFACING MATERIAL- BINDER 60/70 BITUMEN @ 4.6% OF MIX	M.TON	8,812.00
B0-362	ASPHALT/BITUMEN: BOUND BASE MATERIAL- BINDER 60/70 BITUMEN @ 3.5% OF MIX	ITEM DELETED *	
B0-362A	ASPHALT CONCRETE: BINDER COURSE MATERIAL- BINDER 60/70 BITUMEN @ 4.1% OF MIX	M.TON	8,679.00

(FOR PROJECTS & MAINTENANCE)-

B0-365	CUT BACK ASPHALT-AGGREGATE COLD MIX WITH 15% CUT BACK 60/70 @ 5.5% OF MIX (19 mm)	ITEM DELETED *	
B0-365A	CUT BACK ASPHALT-AGGREGATE COLD MIX WITH 16% CUT BACK 60/70 @ 5.5% OF MIX (12.5 mm)	ITEM DELETED *	
B0-366	EMULSIFIED ASPHALT AGGREGATE COLD MIX WITH EMULTION CSS1 @ 6.67% OF AGGREGATE	M.TON	8,357.00

- NOTE: 1. ABOVE RATES INCLUDE TRANSPORT COST FOR: AGGREGATES - 35KM ;DEISEL- 44 KM ; KOIL - 200 KM ;BINDER- 200 KM**
2. ROYLTY ON AGGREGATE MATERIALS: 250
3. FOR DIFFERENT PERCENTAGES OF BINDER, % CUTBACK, SEE GENERAL NOTES: SECTION 29
4. TRANSPORT COST FROM PLANT TO THE LAYING SITE TO BE PAID SEPARATELY.

READY-MIX CONCRETE (EXCLUDING HANDLING COST)

B0-380	GRADE 15 / 20 / 120mm	CU.M	12,059.25
B0-381	GRADE 20 / 20 / 120mm	CU.M	12,699.75
B0-382	GRADE 25 / 20 / 120mm	CU.M	13,315.00
B0-383	GRADE 30 / 20 / 120mm	CU.M	14,043.25
B0-384	GRADE 35 / 20 / 120mm	CU.M	14,940.50
B0-385	GRADE 40 / 20 / 120mm	CU.M	15,524.50

- NOTE: 1. ABOVE RATES ARE CONSIDERED WITHIN 15KM FOR 120MM SLUMP AT SITE**
2. NOMINAL AGGREGATE SIZE 20MM

TIMBER & FIREWOOD (INCLUDING TRANSPORT COST)

B0-391	SAWN TIMBER CLASS 1 (LOCAL)	CU.DECI.M	100.95
B0-392	SAWN TIMBER CLASS 2 (LOCAL)	CU.DECI.M	70.25
B0-393	TIMBER ROUND JUNGLE - 100 MM (MINIMUM) TO 150 MM DIAMETER	METRE	43.80
B0-394	TIMBER ROUND JUNGLE - 150 MM (MINIMUM) TO 200 MM DIAMETER	METRE	84.20
B0-395	FIREWOOD	CU.M	1,568.45
B0-396	PLYWOOD(MR) FOR FORMWORK - 15 MM THICK	SQ.M	943.15
B0-397	BAMBOO TREE LENGTH GREATER THAN 8 METERS	NO.	369.30

CEMENT (INCLUDING TRANSPORT COST)

B0-401	PORTLAND CEMENT(FOR ALL WORK)	BAG (50.Kg)	833.15
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STEEL AND STEEL ITEMS
(INCLUDING TRANSPORT COST)

B0-411	MILD STEEL	KG	139.13
B0-411A	TOR STEEL	KG	139.32
B0-431	BINDING WIRE	KG	196.80
B0-432	WIRE NAILS, M.S.BOLTS & NUTS	KG	175.30
B0-433	STAINLESS STEEL 20 MM DIA.(FOR DOWELS)	METER	921.00
B0-434	GI PIPES, 50 MM DIAMETER: HEAVY DUTY TYPE	METER	1,683.60
B0-435	M.S. SHEET, 2 MM THICK	SQ.METRE	2,647.95

H.S.R. - SCHEDULE OF INPUTS FOR THE YEAR 2019
CENTRAL PROVINCE

CODE

UNIT

PRICE(RS.)

PRECAST CONCRETE ITEMS
EX - FACTORY: MINIMUM PRICE EXCLUDING VAT

REINFORCED CONCRETE PIPES & COLLARS

DIAMETER (M.M)	LENGTH (M.M)		
PIPES			
B0-441	153 (6")	2438 (8')	01 NO. 3,367.30
B0-442	229 (9")	2438 (8')	01 NO. 5,509.05
B0-443	305 (12")	2438 (8')	01 NO. 5,715.45
B0-444	450 (1' 6")	2438 (8')	01 NO. 8,398.40
B0-445	610 (2' 0")	2438 (8')	01 NO. 11,811.25
B0-446	914 (3' 0")	1219 (4')	01 NO. 9,411.35
B0-446A	914 (3' 0")	2438 (8')	01 NO. 19,215.15
B0-447	1219 (4' 0")	1219 (4')	01 NO. 14,282.80
B0-447A	1219 (4' 0")	2438 (8')	01 NO. 31,710.40
COLLARS			
B0-441B	153 (6")		01 NO. 357.15
B0-442B	229 (9")		01 NO. 535.60
B0-443B	305 (12")		01 NO. 749.15
B0-444B	450 (1' 6")		01 NO. 1,027.85
B0-445B	610 (2' 0")		01 NO. 1,163.05
B0-446B	914 (3' 0")		01 NO. 1,535.40
B0-447B	1219 (4' 0")		01 NO. 2,244.45

PRECAST CONCRETE ITEMS

B0-448	STD ROAD KERB 125X250X900 G25 CONCRETE		01 NO. 759.75
B0-449	PAVING SLAB 450X450X50 MM G20 WITH R/F CONCRETE		01 NO. 466.25
B0-449A	PAVING SLAB 450X450X50 MM G20 CONCRETE		01 NO. 287.05
B0-450	BRIDGE KERB 915		01 NO. 1,740.20
B0-451	STD. UPRIGHTS FOR BRIDGES (NEW DESIGN)		01 NO. 2,247.25
B0-452	STD. HAND RAILS FOR BRIDGES (NEW DESIGN)		01 NO. 2,061.55
B0-453	COUPLING PAIRS FOR HAND RAILS		01 PAIR. 599.55
B0-454	RAIN WATER CHANNELS 609 MM LONG		01 NO. 215.00
B0-455	CEMENT SAND HOLLOW BLOCK 16"X8"X4"		01 NO. 52.05
B0-456	FACIA SLAB 4' X 2'		01 NO. 2,602.00
B0-457	GUARD STONES (STANDARD)		01 NO. 3,379.35
B0-458	KILOMETER POST (STANDARD)		01 NO. 4,642.00
B0-459	BOUNDARY MARKER (STANDARD)		01 NO. 2,142.00
B0-460	G25 CONCRETE PAVING BLOCK (220mm x 110mm x 80mm)		01 NO. 38.00
B0-461	G40 CONCRETE PAVING BLOCK (220mm x 110mm x 80mm)		01 NO. 45.50

BLASTING MATERIALS (INCLUDING TRANSPORT COST)

B0-501	BLASTING POWDER		KG. 593.50
B0-502	FUSE WIRE		M. 38.80
B0-503	STEEL, JUMPER		KG. 413.75
B0-504	ELECTRIC DETONATORS		NO. 87.10
B0-505	DYNA CORD		M. 52.10
B0-506	WATER GEL		KG. 779.20
B0-507	AMMONIUM NITRATE		KG. 147.80
B0-508	ORDINARY DETONATOR		NO. 15.50

PAINTS (INCLUDING TRANSPORT COST)

B0-531	BITUMINOUS EMULSION PAINT(CRS-2)		LITRE 80.25
B0-534	GLUE		KG 365.95
B0-537	LIME - BOILED		KG 23.20
B0-541	PAINT-ENAMEL		LITRE 628.65
B0-542	PAINT - ANTI COROSIVE		LITRE 478.35
B0-543	DELETED		-
B0-544	PAINT - EMULSION		LITRE 548.00
B0-545	RUST REMOVER		LITRE 508.75
B0-546	EMULSION FOR EXTERIOR USE (WEATHERSHIELD)		LITRE 700.28
B0-547	ROAD MARKING PAINTS (YELLOW)		LITRE 764.31
B0-548	ROAD MARKING PAINTS (WHITE)		LITRE 672.32

FUEL, OILS & LUBRICANTS

B0-601	INDUSTRIAL KEROSENE OIL (COLOMBO)		LITRE 110.00
B0-602	MOULD OIL		LITRE 44.00
B0-611	LUBRICANT(OIL)		LITRE 472.59
B0-612	AUTO DIESEL (COLOMBO)		LITRE 101.00
B0-613	PETROL (COLOMBO)		LITRE 125.00
B0-614	FURNACE OIL FOR BURNERS		LITRE 92.00
B0-615	LP GAS		KG 143.90
B0-616	LUBRICANT(GREASE))		KG 863.55

H.S.R. - SCHEDULE OF INPUTS FOR THE YEAR 2019
CENTRAL PROVINCE

<u>CODE</u>		<u>UNIT</u>	<u>PRICE(RS.)</u>
MISCELLANEOUS MATERIALS			
B0-631	BASKETS (WITH TRANSPORT)	01 NO.	266.50
B0-632	GUNNY BAGS NEW(LARGE) (WITH TRANSPORT)	01 NO.	60.40
B0-632A	POLY SACS (65 KG CAPACITY) (WITH TRANSPORT)	01 NO.	37.90
B0-633	COTTON WASTE (WITH TRANSPORT)	KG	35.90
B0-634	SALT (WITH TRANSPORT)	KG	15.65
B0-635	EMPTY TAR BARRELS (140 LTRS) WITH TRANSPORT)	NO	90.55
B0-636	P.V.C. PIPE 110 MM DIA TYPE 250 PE (WITH TRANS.)	METRE	374.35
B0-636B	P.V.C. PIPE 110 MM DIA TYPE 400 PE (WITH TRANS.)	METRE	623.70
B0-637	P.V.C. PIPE 50 MM DIA TYPE 400 PE (WITH TRANS.)	METRE	204.05
B0-637A	P.V.C. PIPE 25 MM DIA TYPE 1000 PE (WITH TRANS.)	METRE	117.80
B0-637B	P.V.C. PIPE 90 MM DIA TYPE 400 PE (WITH TRANS.)	METRE	651.10
B0-637C	P.V.C. PIPE 90 MM DIA TYPE 600 PE (WITH TRANS.)	METRE	923.70
B0-637D	P.V.C. PIPE 160 MM DIA TYPE 250 PE (WITH TRANS.)	METRE	1,206.30
B0-637E	P.V.C. PIPE 160 MM DIA TYPE 400 PE (WITH TRANS.)	METRE	1,952.40
B0-637F	P.V.C. PIPE 160 MM DIA TYPE 600 PE (WITH TRANS.)	METRE	2,536.75
B0-637G	P.V.C. PIPE 160 MM DIA TYPE 1000 PE (WITH TRANS.)	METRE	3,928.05
B0-638	HARD RUBBER 12MM THICK X 75 MM WIDE (WITH TRANS)	METRE	1,331.05
B0-639	POLYTHENE 325 MM DIA GAUGE 300 (APPROX.14.0 METERS/KG) (TUBULAR FLAT WIDTH APP. 505 MM, WITH TRANS.)	KG	357.45
B0-639A	POLYTHENE 230 MM DIA GAUGE 300 (APPROX.19.5 METERS/KG) (TUBULAR FLAT WIDTH APP. 355 MM, WITH TRANS.)	KG	357.45
B0-639B	POLYTHENE 150 MM DIA GAUGE 300 (APPROX.28.0 METERS/KG) (TUBULAR FLAT WIDTH APP. 241 MM, WITH TRANS.)	KG	357.45
B0-640	ALLUMINIUM SHEET 24 SWG (WITH TRANSPORT)	SQ.METRE	812.05
B0-641	ANGLE IRON 50X50X6 MM (WITH TRANSPORT)	METRE	543.10
B0-642	M.S. PLATE 12 MM THICK (WITH TRANSPORT)	SQ.M	14,475.55
B0-643	ADHESIVE (WATER RESISSTANT)	KG	1,076.25
B0-644	EMULSIFIER-CSS/CRS	KG	500.00
B0-645	EARLY STRENGTH ADMIXTURES (Usage:300 ml per 50 kg Cement bag)	LTR	143.40
B0-646	TRAFFIC CONES	NO.	1,800.00
B0-647	75 MM X 8 MM DIA NUTS AND BOLTS	NO.	9.65
B0-648	SAW DUST (LOOSE)	CU.M	127.55
B0-649	DRILL STEEL	METER	113.68

PIECE RATES & ALLOWANCES

ALLOW FOR:

B0-704	BARRICADING (SMALL WORK ITEMS)	ITEM	43.78
B0-705	BARRICADING, LIGHTING, SIGNALLING ETCFOR100M (STATIONARY OPERATIONS)	DAY	1,785.14
B0-711	CEMENT, SAND & WATER FOR JOINTING HUME (PIPES 152 MM DIAMETER	JOINT	23.05
B0-712	- DO - 229 TO 610 MM DIAMETER	JOINT	95.70
B0-713	- DO - 915 MM DIAMETER	JOINT	251.02
B0-714	- DO - 1220 MM DIAMETER	JOINT	448.58
B0-715	COIR ROPE (FOR SCAFFOLDING 93 SQ.M AREA)	ITEM	62.48
B0-716	COIR STRING FOR CUTTING SIDE DRAINS (PER 2.83 CU.M)	ITEM	25.03
B0-717	- DO - FIXING SCAFFOLDING (PER 93 SQ.M)	ITEM	156.15
B0-718	MINOR REPAIRS OF PARAPETS WITH CEMENT, SAND & WATER (PER 9.29 SQ.M)	ITEM	102.03
B0-720	FUEL *(FOR LOOSENING ROAD SURFACE IN MANUAL BREAKING 50 MM DEPTH X 307 SQ.M)	ITEM	35.37
B0-723	FUEL, FORGE ETC.(PER 2.83 CU.M BLASTING)	ITEM	44.44
B0-732	LADDERS (PER 93 SQ.M)	ITEM	138.22
B0-741	PAINT (FOR LETTERING & NUMBERING ITEMS)	ITEM	112.31
B0-746	PEGS (FOR TURFING IN 19 SQ.M AREA)	ITEM	41.53
B0-751	SAND PAPER & COTT. WASTE (PER 9.29 SQ.M)	ITEM	133.71
B0-752	SHARP. SCARIFIER TYNES (FOR 307 SQ.M)	ITEM	45.60
B0-761	TIMBER PLANKS & BAMBOOS (FOR 93 SQ.M))	ITEM	934.89
B0-762	TIMBER POST, HORIZONTAL ETC. (FOR BARRICADING WORK IN 4 L.M.)	ITEM	374.44

WATER FOR CONCRETING:

B0-781	ALLOW FOR WATER (FOR MIXING BY MACHINE)	PER	CU.M	26.90
B0-782	ALLOW FOR WATER (FOR MIXING MANUALLY)	PER	CU.M	21.50

WATER FOR COMPACTION & GENERAL USE

B0-784	ALLOW FOR WATER (GRAVEL COMPACTION)	PER	CU.M	16.15
B0-785	ALLOW FOR WATER (AGGREGATE COMPACTION)	PER	CU.M	21.50
B0-786	ALLOW FOR WATER (MOISTENING ROAD SURFACE)	ITEM	64.65	
B0-787	ALLOW FOR WATER SUPPLY (BY BUCKET & COIR ROPE)	ITEM	26.90	
B0-788	WATER FOR GENERAL PURPOSES	LITRE	1.15	

H.S.R. - SCHEDULE OF INPUTS FOR THE YEAR 2019
CENTRAL PROVINCE

<u>CODE</u>		<u>UNIT</u>	<u>PRICE(RS.)</u>
WHITE WASHING FOR BARRICADING			
B0-791	WHITE WASHING EMPTY BARRELS (BITUMEN)	01 NO.	46.40
B0-792	WHITE WASHING TIMBER POSTS, HORIZONTALS, ETC. (IN 4 L.M. BARRICADING)	01 ITEM	17.35

FOLLOWING MATERIAL PRICES ARE FOR ESTIMATION ONLY
(PAYMENTS SHOULD BE BASED ON APPROVED TENDER PRICES)

THERMOPLASTIC ROAD MARKING MATERIALS EXCLUDING TRANSPORT & VAT			
B0-800	THERMO PLASTIC ROAD MARKING MATERIAL(WHITE)	KG	195.00
B0-801	THERMO PLASTIC -DO- (YELLOW)	KG	195.00
B0-802	GLASS BEADS	KG	195.00
B0-803	CATS EYE (ALUMINIUM ROAD STUD, DOUBLE SIDED)	NO.	1,775.00
B0-804	DELETED		
B0-805	DELETED		
B0-806	ZEBRA BARRICADING TAPE (POLYTHENE)	METRE	10.15

P.C.C. BEAMS (Wires) EXCLUDING TRANSPORT & VAT

NOTE: Rates for 2019 to be negotiated and decide

	BEAM LENGTH	FT.	M	WT.(Tonnes)		
B0-810	P.C.C BEAM	11'.0	3.35	0.89	PER BEAM	RN
B0-811	P.C.C BEAM	14'.0	4.26	1.13	PER BEAM	RN
B0-812	P.C.C BEAM	17'.0	5.18	1.57	PER BEAM	RN
B0-813	P.C.C BEAM	20'.0	6.09	2.08	PER BEAM	RN
B0-814	P.C.C BEAM	23'.0	7.01	2.26	PER BEAM	RN
B0-814A	P.C.C BEAM	27'.0	8.23	2.19	PER BEAM	RN
B0-815	P.C.C BEAM	32'.0	9.75	2.59	PER BEAM	RN
B0-816	P.C.C BEAM	35'.0	10.67	2.86	PER BEAM	RN
B0-817	P.C.C BEAM	40'.0	12.19	3.80	PER BEAM	RN
B0-818	P.C.C BEAM	44'.0	13.41	4.22	PER BEAM	RN
B0-819	P.C.C BEAM	53'.0	16.15	5.07	PER BEAM	RN

P.C.C. BEAMS(Strands) EXCLUDING TRANSPORT & VAT

NOTE: Rates for 2019 to be negotiated and decide

	BEAM LENGTH	FT.	M	WT.(Tonnes)		
B0-830	P.C.C BEAM	31.16'	9.5	2.32	PER BEAM	RN
B0-831	P.C.C BEAM	37.72'	11.5	3.21	PER BEAM	RN
B0-832	P.C.C BEAM	44.28'	13.5	4.20	PER BEAM	RN
B0-833	P.C.C BEAM	47.56'	14.5	4.71	PER BEAM	RN
B0-834	P.C.C BEAM	50.84'	15.5	5.44	PER BEAM	RN
B0-835	P.C.C BEAM	54.12'	16.5	6.16	PER BEAM	RN

GABION MESH EXCLUDING TRANSPORT & VAT

ZINC COATED GABION BOXES

B0-850	1X1X1M INCLU. COATED TIE (BINDING)WIRE @ 5% OF GABION WEIGHT	PER BOX	4,412.50
B0-851	2X1X0.5M INCLU. COATED TIE(BINDING) WIRE @ 5% OF GABION WEIGHT	PER BOX	5,495.00
B0-852	1.5X1X1M INCLU. COATED TIE (BINDING) WIRE @ 5% OF GABION WEIGHT	PER BOX	5,850.00
B0-853	2X1X1M INCLU. COATED TIE (BINDING)WIRE @ 5% OF GABION WEIGHT	PER BOX	7,395.00
B0-854	3X1X1M INCLU. COATED TIE (BINDING)WIRE @ 5% OF GABION WEIGHT	PER BOX	10,825.00

PVC COATED GABION BOXES

B0-850A	1X1X1M INCLU. COATED TIE (BINDING)WIRE @ 5% OF GABION WEIGHT	PER BOX	4,924.50
B0-851A	2X1X0.5M INCLU. COATED TIE(BINDING) WIRE @ 5% OF GABION WEIGHT	PER BOX	5,975.00
B0-852A	1.5X1X1M INCLU. COATED TIE (BINDING) WIRE @ 5% OF GABION WEIGHT	PER BOX	6,397.50
B0-853A	2X1X1M INCLU. COATED TIE (BINDING)WIRE @ 5% OF GABION WEIGHT	PER BOX	8,537.50
B0-854A	3X1X1M INCLU. COATED TIE (BINDING)WIRE @ 5% OF GABION WEIGHT	PER BOX	12,150.00

GEOTEXTILES EXCLUDING TRANSPORT & VAT

B0-860	GEOTEXTILE	PER 1 SQ.M	250.00
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HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE	DESCRIPTION OF ITEM	UNIT	AMOUNT (RS.)	LABOUR INPUT	OTHER INPUTS
SECTION I =====					
TRANSPORT -----					
* SEE SECTION 23 OF GENERAL NOTES FOR SELECTION OF MODE OF TRANSPORT					
T1-001	TRANSPORT OF SOILS 25M TO 100M BY ANY MEANS (INCL. LOADING AND UNLOADING):	CU.M	465.10	453.75	11.35
T1-002	TRANSPORT 100M TO 0.5 KM BY ANY MEANS (EXCLUDING LOADING):	CU.M	261.35	0.00	261.35
T1-003	TRANSPORT 0.5 KM TO 1.0 KM BY ANY MEANS (EXCLUDING LOADING):	CU.M	280.00	0.00	280.00
T1-003A	TRANSPORT OF EACH SUBSEQUENT 1.0 KM FROM 1.0 - 8.0 KM. BY ANY MEANS : (EXCLUDING LOADING)	CU.M	43.55	0.00	43.55
T1-003B	TRANSPORT OF EACH SUBSEQUENT 1.0 KM BEYOND 8 KM. BY ANY MEANS: (EXCLUDING LOADING)	CU.M	29.25	0.00	29.25
* T1-003A, T1-003B: CODES CHANGED AS T1-003A AND T1-003B					
T1-006	TRANSPORT OF MATERIAL IN BULK EXCLUDING LOADING (FOR DISTANCE LESS THAN OR EQUAL 3 KILO METRES):	CU.M	89.15	0.00	89.15
T1-007	TRANSPORT OF MATERIAL IN BULK EXCLUDING LOADING (FROM 3 KM UPTO 10 KILO METRES DISTANCE):	CU.M/KM	29.70	0.00	29.70
T1-007A	TRANSPORT OF MATERIAL IN BULK EXCLUDING LOADING (FOR DISTANCE MORE THAN 10 KILO METRES):	CU.M/KM	26.20	0.00	26.20
* T1-008 : CODE AMENDED AS T1-007A					
T1-009	TRANSPORT OF PREMIX IN BULK, EXCLUDING LOADING OTHER THAN AT MIXING PLANT	M.TON/KM	18.90	0.00	18.90
T1-010	TRANSPORT OF BARRELS OF BITUMEN FOR FIRST 1.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING):	NOS.	41.00	4.23	36.77
T1-010A	TRANSPORT OF BARRELS OF BITUMEN FOR EACH SUBSEQUENT 1.0 KM, FROM 1.0 - 8.0 KM. (EXCLUDING LOADING AND UNLOADING):	NOS.	9.95	4.23	5.72
T1-010B	TRANSPORT OF BARRELS OF BITUMEN FOR EACH SUBSEQUENT 1.0 KM BEYOND 8 KM. (EXCLUDING LOADING AND UNLOADING):	NOS.	6.95	3.09	3.86
* T1-011 & T1-012 CODES CHANGED					
T1-013	LOADING BARRELS OF BITUMEN INCLUSIVE OF ROLLING UPTO 25M :	NOS.	28.90	28.90	0.00
T1-014	UNLOADING BARRELS OF BITUMEN INCLUSIVE OF ROLLING AND STACKING :	NOS.	12.40	12.40	0.00

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT (RS.) -----	LABOUR INPUT -----	OTHER INPUTS -----
T1-015	TRANSPORT OF HUME PIPES 152MM DIA. FOR 1ST 1.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	30.90	4.13	26.77
T1-015A	TRANSPORT OF HUME PIPES 152MM DIA. FOR EACH SUBSEQUENT 1.0 KM, FROM 1.0 - 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	8.30	4.13	4.17
T1-015B	TRANSPORT OF HUME PIPES 152MM DIA. FOR EACH SUBSEQUENT 1.0 KM BEYOND 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	5.95	3.16	2.79
* T1-016 & T1-017 CODES CHANGED					
T1-018	TRANSPORT OF HUME PIPES 229 MM DIA. FOR 1ST 1.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	34.75	4.65	30.10
T1-018A	TRANSPORT OF HUME PIPES 229 MM DIA. FOR EACH SUBSEQUENT 1.0 KM, FROM 1.0 - 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	9.35	4.65	4.70
T1-018B	TRANSPORT OF HUME PIPES 229 MM DIA. FOR EACH SUBSEQUENT 1.0 KM BEYOND 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	6.70	3.55	3.15
* T1-019 & T1-020 : CODES CHANGED					
T1-021	TRANSPORT OF HUME PIPES 305 MM DIA. FOR 1ST 1.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	46.35	6.20	40.15
T1-021A	TRANSPORT OF HUME PIPES 305 MM DIA. FOR EACH SUBSEQUENT 1.0 KM, FROM 1.0 - 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	12.45	6.20	6.25
T1-021B	TRANSPORT OF HUME PIPES 305 MM DIA. FOR EACH SUBSEQUENT 1.0 KM BEYOND 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	8.95	4.73	4.22
* T1-022 & T1-023: CODES CHANGED					
T1-024	TRANSPORT OF HUME PIPES 457 MM DIA. FOR 1ST 1.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	69.55	9.30	60.25
T1-024A	TRANSPORT OF HUME PIPES 457 MM DIA. FOR EACH SUBSEQUENT 1.0 KM, FROM 1.0 - 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	18.65	9.30	9.35
T1-024B	TRANSPORT OF HUME PIPES 457 MM DIA. FOR EACH SUBSEQUENT 1.0 KM BEYOND 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	13.40	7.10	6.30
* T1-025 & T1-026: CODES CHANGED					

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT (RS.) -----	LABOUR INPUT -----	OTHER INPUTS -----
T1-027	TRANSPORT OF HUME PIPES 610 MM DIA. FOR 1ST 1.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	92.70	12.40	80.30
T1-027A	TRANSPORT OF HUME PIPES 610 MM DIA. FOR EACH SUBSEQUENT 1.0 KM, FROM 1.0 - 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	24.90	12.40	12.50
T1-027B	TRANSPORT OF HUME PIPES 610 MM DIA. FOR EACH SUBSEQUENT 1.0 KM BEYOND 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	17.85	9.47	8.38
* T1-028 & T1-029: CODES CHANGED					
T1-030	TRANSPORT OF HUME PIPES 915 MM DIA. FOR 1ST 1.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	139.10	18.60	120.50
T1-030A	TRANSPORT OF HUME PIPES 915 MM DIA. FOR EACH SUBSEQUENT 1.0 KM, FROM 1.0 - 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	37.35	18.60	18.75
T1-030B	TRANSPORT OF HUME PIPES 915 MM DIA. FOR EACH SUBSEQUENT 1.0 KM BEYOND 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	26.80	14.20	12.60
* T1-031 & T1-032: CODES CHANGED					
T1-033	TRANSPORT OF HUME PIPES 1220 MM DIA. DIA. FOR 1ST 1.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	315.35	74.39	240.96
T1-033A	TRANSPORT OF HUME PIPES 1220 MM DIA. FOR EACH SUBSEQUENT 1.0 KM, FROM 1.0 - 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	111.85	74.39	37.46
T1-033B	TRANSPORT OF HUME PIPES 1220 MM DIA. FOR EACH SUBSEQUENT 1.0 KM BEYOND 8.0 KM OF TRANSPORT (EXCLUDING LOADING AND UNLOADING) :	L.M	81.30	56.13	25.17
* T1-034 & T1-035: CODES CHANGED					
T1-036	LOADING AND UNLOADING 152 MM DIA. 2.44 M LONG HUME PIPES :	NOS	89.10	89.10	0.00
T1-037	LOADING AND UNLOADING 229 MM DIA. 2.44 M LONG HUME PIPES :	NOS	103.95	103.95	0.00
T1-038	LOADING AND UNLOADING 305 MM DIA. 2.44 M LONG HUME PIPES :	NOS	206.25	206.25	0.00
T1-039	LOADING AND UNLOADING 457 MM DIA. 2.44 M LONG HUME PIPES :	NOS	343.20	343.20	0.00
T1-040	LOADING AND UNLOADING 610 MM DIA. 2.44 M LONG HUME PIPES :	NOS	447.15	447.15	0.00

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT (RS.) -----	LABOUR INPUT -----	OTHER INPUTS -----
T1-041	LOADING AND UNLOADING 915 MM DIA. 1.22 M LONG HUME PIPES :	NOS	825.00	825.00	0.00
T1-042	LOADING AND UNLOADING 1220 MM DIA. 1.22 M LONG HUME PIPES :	NOS	1,650.00	1650.00	0.00
T1-043	TRANSPORT OF PRECAST KERB STONES (ALL TYPES) FOR ROAD WORKS, INCLUDING LOADING AND UNLOADING :	L.M/KM	1.45	0.17	1.28
T1-044	TRANSPORT OF PRECAST KERB STONES FOR BRIDGE WORKS, INCLUDING LOADING AND UNLOADING :	L.M/KM	2.20	0.36	1.84
T1-045	TRANSPORT OF PRECAST CONCRETE HAND RAILS, UP-RIGHTS AND JOINTS FOR BRIDGE WORKS, INCLUDING LOADING AND UNLOADING :	L.M/KM	3.30	0.43	2.87
T1-046	TRANSPORT OF PRECAST CONCRETE SLABS 450X450X50 MM FOR FOOT WALKS, INCLUDING LOADING AND UNLOADING :	SQ.M/KM	4.00	0.50	3.51
T1-047	TRANSPORT OF PRECAST STANDARD BOUNDARY MARKERS, INCLUDING UNLOADING ONLY* :	NO./KM	2.00	0.18	1.82
	* SUPPLY RATE INCLUDE LOADING AT YARD.				
T1-048	TRANSPORT OF EMULSION RATE FOR 100 LITERS PER KILO METRE	100L/KM	3.40	0.00	3.40
T1-049	TRANSPORT OF GABION MESH 4 X 1 X1 M SIZE	NO./KM	0.95	0.02	0.93

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HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION II =====					
ROADWAY AND FOUNDATION / TRENCH EXCAVATION -----					
(INCLUDING LOADING, UNLOADING AND TRANSPORTING WITHIN 25 METERS DISTANCE UNLESS OTHERWISE SPECIFIED)					
* NOTE FOR ROADWAY EXCAVATIONS INVOLVING MORE THAN 300 CU.M , MACHINE RATES SHOULD BE ADOPTED. -----					
E1-001	EXCAVATION IN LOOSE SOIL (DRY) [SSCM 301.2(IV)] :	CU.M	629.00	583.04	45.96
E1-002	EXCAVATION IN LOOSE SOIL (WET) IN SLIPS [SSCM 301.3(0)] :	CU.M	778.40	728.80	49.60
E1-003	EXCAVATION IN ORDINARY SOIL (CUTTING MEASUREMENT) [SSCM 301.2(V)] :	CU.M	927.80	874.56	53.24
E1-004	EXCAVATION IN ORDINARY SOIL (VEHICLE MEASUREMENT) [SSCM 301.2(V)] :	CU.M	835.05	787.10	47.95
E1-005	EXCAVATION IN MEDIUM SOIL (CUTTING MEASUREMENT) [SSCM 301.2(VI)] :	CU.M	1,226.60	1,166.08	60.52
E1-006	EXCAVATION IN MEDIUM SOIL (VEHICLE MEASUREMENT) [SSCM 301.2(VI)] :	CU.M	1,042.65	991.17	51.48
E1-007	EXCAVATION IN HARD SOIL (CUTTING MEASUREMENT) [SSCM 301.2(VII)] :	CU.M	1,824.25	1,749.12	75.13
E1-008	EXCAVATION IN HARD SOIL (VEHICLE MEASUREMENT) [SSCM 301.2(VII)] :	CU.M	1,550.60	1,486.75	63.85
E1-009	EXCAVATION IN UNCLASSIFIED SOIL (CUTTING MEASUREMENT) [SSCM 301.2(VII)] :	CU.M	1,326.20	1,263.25	62.95
NOTE: SEE CODE NOS. FROM E1-027 ON PAGE 13 FOR ROADWAY EXCAVATION USING MACHINERY					
E1-010	EXCAVATION IN SOFT ROCK (CUTTING MEASUREMENT) [SSCM 301.2(VII)] :	CU.M	1,973.65	1,894.88	78.77
E1-010A	EXCAVATION IN MUD MARSHY MATERIAL (CUTTING MEASUREMENT) [SSCM 301.2(VII)] :	CU.M	1,525.45	1,457.60	67.85
E1-011	EXCAVATION PIT/TRENCH FOR FOUNDATION IN ORDINARY SOIL NOT EXCEEDING 1.5 M. DEEP, INCLUDING LEVELLING AND RAMMING BOTTOM, EXCAVATED MATERIAL DEPOSITED AT SITE WITH IN 25 M OR AS DIRECTED. * (SHORING, DEWATERING IF NECESSARY SHALL BE PAID SEPERATELY) [SSCM 302.1-302.3] :	CU.M	1,226.60	1,166.08	60.52
* NOTE SEE GENERAL NOTES 24(2) FOR DETAILS REGARDING ADDITIONAL EXCAVATION REQUIRED FOR WORKING SPACE.					

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT -----	OTHER INPUTS -----
E1-012	DITTO - MEDIUM SOIL, - DO - DO - :	CU.M	1,525.45	1,457.60	67.85
E1-013	DITTO - HARD SOIL, - DO - DO - :	CU.M	2,123.05	2,040.64	82.41
E1-014	DITTO - IN UNCLASSIFIED SOIL, - DO - DO - :	CU.M	1,625.05	1,554.77	70.28
E1-015	DITTO - MUD/MARSHY MATERIAL, - DO -	DO CU.M	1,824.25	1,749.12	75.13
E1-016	DELETED				
E1-017	DELETED				
E1-018	DELETED				
E1-019	EXCAVATING SOFT ROCK, NOT EXCEEDING 1.5 M DEPTH [SSCM 301.2(II)] :	CU.M	2,421.85	2,332.16	89.69
	* NOTE EXCAVATING ROCK FOR FOUNDATION TO BE PAID ON S.S.R.				
E1-020	DELETED				
E1-021	PILING AVAILABLE SOIL :	CU.M	149.40	145.76	3.64
E1-022	LOADING AVAILABLE SOIL	CU.M	197.20	192.40	4.80
E1-023	EXCAVATING ROCK, REQUIRING BLASTING, FOR ROADWAY AND AT QUARRY FOR BOULDERS (BANK MEASUREMENT - EXCLUDING DOZING AWAY) [SSCM 301.2(III) & 306.1 - 306.4] :	CU.M	876.30	41.02	835.28
E1-024	BOULDERS SLEDGING, PILING, ETC.:	CU.M	2,915.65	2,844.52	71.13
E1-025	ROCK REQUIRING BLASTING (BANK MEASUREMENT):	CU.M	2,694.25	2,438.16	256.09
E1-026	ROCK REQUIRING BLASTING AND PILING (BANK MEASUREMENT)	CU.M	3,518.25	3,242.05	276.20
E1-027	ROADWAY EXCAVATION IN UNCLASSIFIED SOIL USING MACHINERY EXCLUDING LOADING AND PILING. (CUTTING MEASUREMENT)	CU.M	215.45	8.17	207.28
E1-028	LOADING MATERIAL BY MACHINERY IN ROADWAY EXCAVATIONS (CUTTING MEASUREMENT)	CU.M	131.40	4.51	126.89
E1-029	TRIMMING / CAMBERING BY MOTOR GRADER (CUTTING MEASUREMENT)	CU.M	53.90	1.65	52.25
E1-029A	- DO - RATE PER 1 SQ.M	SQ.M	10.80	0.33	10.47

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HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION III =====					
AGGREGATE/RUBBLE PILING INCLUDING LOADING -----					
A1-001	SLEDGING AVAILABLE ROCK 150-225 MM RUBBLE INCLUDING PILING & LOADING :	CU.M	2,345.20	2,287.99	57.21
A1-002	BLASTING ETC. & PILING 150-225MM RUBBLE INCLUDING LOADING :	CU.M	3,445.80	3,171.38	274.42
A1-002A	BLASTING SLEDGING ETC. & PILING 150-225MM RUBBLE USING COMPRESSOR & HAND HELD DRILLS INCLUDING LOADING :	CU.M	2,143.20	868.06	1,275.14
A1-003	BLASTING ETC. & PILING 100 MM AGGREGATE, INCLUDING LOADING :	CU.M	2,250.36	External Sources	
A1-004	BLASTING ETC. & PILING 75 MM AGGREGATE INCLUDING LOADING :	CU.M	2,303.94	External Sources	
A1-005	BLASTING ETC. & PILING 50 MM AGGREGATE INCLUDING LOADING :	CU.M	2,357.52	External Sources	
A1-006	BLASTING ETC. & PILING 37.5 MM AGGREGATE INCLUDING LOADING :*	DELETED			
A1-007	BLASTING ETC. & PILING 25 MM AGGREGATE INCLUDING LOADING :*	DELETED			
A1-008	BLASTING ETC. & PILING 19 MM AGGREGATE INCLUDING LOADING : *	DELETED			
* NOTE	PRIOR APPROVAL OF THE P.DD. SHOULD BE OBTAINED FOR THE USE OF 19 MM, 25 MM AND 37.5 MM HAND BROKEN AGGREGATE.				
A1-009	50 MM AGGREGATE, SINGLE SIZE, CRUSHER PRODUCTION INCLUDING PILING AND LOADING [SSCM404.1-406.1] :	CU.M	4,300.00	External Sources	
A1-010	37.5 MM AGGREGATE, SINGLE SIZE, CRUSHER PRODUCTION INCLUDING PILING AND LOADING [SSCM404.1-406.1] :	CU.M	4,900.00	External Sources	
A1-011	19 MM AGGREGATE, SINGLE SIZE CRUSHER PRODUCTION INCLUDING PILING AND LOADING [SSCM404.1-406.1] :	CU.M	4,991.00	External Sources	
A1-012	12.5 MM AGGREGATE, SINGLE SIZE CRUSHER PRODUCTION INCLUDING PILING AND LOADING FOR 1.0 CUBE :	CU.M	4,180.10	External Sources	

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
PLANT PRODUCED AGGREGATE FOR DENSE GRADED AGGREGATE BASE COURSE					
A1-013	AGGREGATE 37.5 MM, DOWN GRADED (SSCM - TABLE 1701.5) INCLUDING PILING & LOADING :	CU.M	2,208.50	External Sources	
A1-014	CRUSHER FINES 6.3 MM DOWN, INCLUDING PILING AND LOADING FOR 1.0 CUBE:	CU.M	1,333.90	External Sources	
A1-015	AGGREGATE 19 MM FOR SEAL COAT TREATMENTS AS PER SSCM TABLE 1701-8	CU.M	4,991.00	External Sources	
A1-016	AGGREGATE 12.5 MM FOR SEAL COAT TREATMENTS AS PER SSCM TABLE 1701-8	CU.M	4,180.10	External Sources	
A1-017	BLENDED AGGREGATE FOR RECTIFICATION OVERLAY, WITH 37.5 MM SINGLE SIZE AGGREGATE AND 19 MM & 12.5 MM CRUSHED AGGREGATE MIXED IN THE VOLUME RATIO OF 7:2:1, INCLUDING MIXING, LOADING. (PILING TO PLAY SEPARATELY) :* * PRIOR APPROVAL OF THE P.DD SHOULD BE OBTAINED FOR THE USE OF BLENDED AGGREGATE IN RECTIFICATION OVERLAY CONSTRUCTION WORK.	CU.M	5,087.65	0.00	5,087.65
A1-018	PILING AVAILABLE AGGREGATE:	CU.M	163.00	159.01	3.99
A1-019	PILING AVAILABLE RUBBLE:	CU.M	325.95	318.02	7.93
A1-020	LOADING AVAILABLE RUBBLE/AGGREGATE:	CU.M	298.80	291.52	7.28

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HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE	DESCRIPTION OF ITEM	UNIT	AMOUNT RS.	LABOUR INPUT	OTHER INPUTS
SECTION IV =====					
APPROVED EARTH FILLING & COMPACTION -----					
* NOTE	RATES FOR BORROW EARTH SUPPLY GIVEN UNDER ITEM CODES EW1-001 & EW1-011 IN THIS SCHEDULE IS BASED ON MANUAL EXCAVATION AND INTENDED FOR SMALL WORKS INVOLVING LESS THAN 300 CU.M . IN THE CASE OF BORROW EARTH SUPPLY EXCEEDS 300 CU.M(FOR THE WHOLE PROJECT), RATES BASED ON MACHINE EXCAVATION AS PER B0-201, B0-202, EW1-013 OR EW1-014 SHALL BE ADOPTED. FOR ANY DEVIATIONS THE PROCURAMENT PROCEDURE GIVEN IN " GENERAL NOTES ", SHALL BE FOLLOWED.				
EW1-001	APPROVED SOIL (TYPE I & II MATERIALS) EXCAVATION FOR SUB BASES & SHOULDER CONSTRUCTION INCLUDING LOADING AND PILING (LOOSE VOLUME) [SSCM 601.1 TO 601.4] :	CU.M	1,763.50	1,679.15	84.35
EW1-002	SPREADING PILED GARVEL (LOOSE VOLUME):	CU.M	213.15	182.12	31.03
EW1-003	* APPROVED SOIL SPREAD & ROLLED INCLUDING HIRE CHARGES, FUEL & WATERING (LOOSE VOLUME) [SSCM 601.1 TO 4] :	CU.M	413.60	182.12	231.48
	* SEE GENERAL NOTES SECTION 26.4 FOR RATE ON COMPACTED VOLUME.				
	* NOTE : THE ITEMS EW1-003 OR EW1-004 ON MANUAL SPREADING SHOULD BE ADOPTED ON APPROVAL BY PD / CE FOR SMALL WORKS ONLY. WHEN MACHINERY IS USED FOR SPREADING AND COMPACTION, EW1-003A SHALL BE ADOPTED.				
EW1-003A	APPROVED SOIL SPREAD & ROLLED USING MACHINERY INCLUDING MOTOR GRADER & ROLLER HIRE CHARGES, FUEL & WATERING (LOOSE VOLUME) [SSCM 601.1 TO 4] :	CU.M	262.45	0.00	262.45
	* SEE GENERAL NOTES SECTION 26.4 FOR RATE ON COMPACTED VOLUME.				
EW1-004	APPROVED SOIL SPREAD & ROLLED IN STRIPS WHERE AVERAGE WIDTH IS LESS THAN 1.2 METERS FOR ROAD WIDENING, INCLUDING HIRE CHARGES, FUEL & WATERING (LOOSE VOLUME) [SSCM 601.1 TO 4] :	CU.M	489.20	182.12	307.08
	* SEE GENERAL NOTES SECTION 26.4 FOR RATE ON COMPACTED VOLUME.				
EW1-005	DELETED				
EW1-006	APPROVED SOIL SPREAD AND COMPACTED IN PLACES BEHIND ABUTMENTS AND STRUCTURES, SHOULDERS ABOVE SUB BASE LEVEL AND IN SERVICE LINE TRENCHES USING 1/2 - 1 TON VIBRATING ROLLER INCLUDING WATERING. (LOOSE VOLUME) :	CU.M	532.85	235.71	297.14
	* SEE GENERAL NOTES SECTION 26.4 FOR RATE ON COMPACTED VOLUME.				

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
EW1-007	APPROVED SOIL SPREAD AND COMPACTED USING MACHINE RAMMER IN NARROW PLACES. (LOOSE VOLUME) :	CU.M	564.65	235.71	328.94
EW1-008	SPREADING, LEVELLING AND COMPACTING MANUALLY, USING STANDARD CAST IRON TAMPER OR EQUIVALENT AND FILLING IN 150-225 MM THICK LAYERS (LOOSE VOLUME) :	CU.M	672.30	655.92	16.38
EW1-009	TRIMMING, LEVELLING AND COMPACTION OF ORIGINAL GROUND/SUBGRADE TO 100% STD. DENSITY. [SSCM 304.3(C)] :	SQ.M	95.80	5.50	90.30
EW1-010	TRIMMING, LEVELLING AND COMPACTION OF ORIGINAL GROUND/SUBGRADE TO 95% STD. DENSITY. [SSCM 304.3(C)] :	SQ.M	87.10	5.00	82.10
EW1-011	APPROVED SOIL EXCAVATION FOR EMBANKMENT FILLING INCLUDING LOADING AND PILING. (LOOSE VOLUME) [SSCM 601.1 TO 601.4] :	CU.M	1,255.55	1,183.57	71.98
EW1-012	DELETED				
EW1-013	APPROVED SOIL(TYPE I & II MATERIALS) EXCAVATION USING MACHINERY FOR SUB BASES & SHOULDER CONSTRUCTION INCLUDING LOADING AND PILING. (LOOSE VOLUME) [SSCM 601.1 TO 604.4]	CU.M	561.65	145.76	415.89
EW1-014	APPROVED SOIL(TYPE I & II MATERIALS) EXCAVATION USING MACHINERY FOR EMBANKMENT FILLING INCLUDING LOADING AND PILING. (LOOSE VOLUME) [SSCM 601.1 TO 604.4]	CU.M	438.00	145.76	292.24
EW1-015	GRADING AND SPREADING BY MOTOR GRADER RATE PER CU.M (LOOSE)	SAY	102.00	0.00	102.00

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HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
	SECTION V =====				
	RUBBLE PAVING =====				
	(RUBBLE TO BE PAID SEPARATELY) -----				
P1-001	PITCHED PAVING 225 MM THICK:	SQ.M	397.20	387.51	9.69
P1-002	PITCHED PAVING 150 MM THICK:	SQ.M	297.90	290.64	7.26
P1-003	FLAT PAVING 225 MM THICK:	SQ.M	264.15	257.70	6.45
P1-004	FLAT PAVING 150 MM THICK:	SQ.M	198.60	193.76	4.84

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HSR - 2019
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Ministry of Highways & Road Development
and Petroleum Resources Development

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION VI =====					
AGGREGATE SPREADING & COMPACTION -----					
COST OF WATERING TO BE DEDUCTED FROM RATE IF NOT CARRIED OUT UNDER THE RELEVANT ITEMS.					
NOTE: COST OF AGGREGATE SUPPLY AND TRANSPORT, NOT INCLUDED IN THE RATES FOR ITEMS: M1-001, M1-004,M1-007,M1-008 AND M1-009					
M1-001	SPREADING, WATERING & ROLLING 100 MM AGGREGATE INCLUDING HIRE CHARGES OF ROLLER. (LOOSE VOLUME) [SSCM 304.3(d),(e)]:	CU.M	930.45	397.35	533.10
M1-002	BREAKING ROAD SURFACE TO 50 MM DEPTH BY HAND, SCREEN & REPLACE OLD AGGREGATE. :	SQ.M	110.65	105.27	5.38
M1-003	SCARIFYING ROAD SURFACE TO 50 MM DEPTH BY MACHINARY, SCREEN, & REPLACE OLD AGGREGATE. :	SQ.M	83.00	45.50	37.50
M1-004	SPREADING & COMPACTING 50-19 MM NEW AGGREGATE BY ROLLER INCLUDING WATERING HIRE, ETC.(LOOSE VOLUME)[SSCM 403.3(c)]:	CU.M	1,422.95	751.14	671.81
M1-005	BREAKING 50 MM ADDITIONAL DEPTH BY HAND SCREENING & REPLACING OLD AGGREGATE. :	SQ.M	66.50	62.22	4.28
M1-006	SCARIFYING 50 MM ADDITIONAL DEPTH WITH MACHINARY, SCREENING & REPLACING OLD AGGREGATE. :	SQ.M	66.45	29.36	37.09
M1-007	SPREADING & COMPACTING 50-19 MM AGGREGATE IN EDGE CORRECTION USING ROLLER INCLUDING HIRE, ETC.(LOOSE VOLUME)[SSCM 1103.3]:	CU.M	1,751.10	522.20	1,228.90
M1-008	SPREADING & COMPACTING 50-19 MM AGGREGATE IN STRIP CORRECTION USING ROLLER INCLUDING HIRE, ETC.(LOOSE VOLUME)[SSCM 1103.3]:	CU.M	1,435.65	522.20	913.45
M1-009	SPREADING & COMPACTING 50-19 MM AGGREGATE BY D.ROLLER AFTER APPLYING TACK COAT IN OVERLAY. (LOOSE VOLUME)(TACK COAT PAID SEPARATELY) :	CU.M	1,304.25	522.20	782.05
M1-010	WATER BOUND MACADAM - SPREADING WATERING AND COMPACTING 50-25 MM AGGREGATE AND FILLING THE VOIDS TO REFUSAL WITH CRUSHER FINES BY WATERING AND ROLLING TO FORM A WATER BOUND MACADAM BASE EXCLUDING TRANSPORT FOR AGGREGATES AND FINES. (LOOSE VOLUME) [(SSCM 404.1)]:	CU.M	7,337.00	952.94	6,384.06
M1-011	DRY BOUND MACADAM - SPREADING WATERING AND COMPACTING 50-25 MM AGGREGATE AND FILLING THE VOIDS TO REFUSAL WITH CRUSHER FINES BY ROLLING WITH VIBRATING ROLLER TO FORM A DRY BOUND MACADAM BASE EXCLUDING TRANSPORT FOR AGGREGATES AND FINES (LOOSE VOLUME)[SSCM 404.1]:	CU.M	7,108.00	952.94	6,155.06

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
M1-012	DELETED				
M1-012A	DENSE GRADED AGGREGATE BASE [AGGREGATE BASE COURSE] SPREADING WATERING AND COMPACTING GRADED 37.5 MM AGGREGATE TO FORM A DENSE AGGREGATE BASE USING MACHINERY INCLUDING MOTOR GRADER & ROLLER HIRE CHARGES (TRANSPORT OF AGGREGATES TO BE PAID SEPARATELY) (LOOSE VOLUME)[SSCM 405.1]:	CU.M *	2,713.23	0.00	2,713.23
	* FOR THE RATE ON COMPACTED VOLUME, INCREASE THE LOOSE VOLUME RATE BY 42%. IF MEASUREMENT IS ON END PRODUCT, PILING COST OF AGGREGATE AS PER A1-018 SHALL BE DEDUCTED.				
M1-013	DENSE GRADED AGGREGATE BASE [AGGREGATE BASE COURSE] SPREADING, WATERING AND COMPACTING GRADED 37.5 MM AGGREGATE TO FORM A DENSE AGGREGATE BASE IN STRIPS OF AVERAGE WIDTH NOT EXCEEDING 1.2 M FOR ROAD WIDENING EXCLUDING TRANSPORT OF AGGREGATES (LOOSE VOLUME)[SSCM 405.1]:	CU.M *	3,619.80	544.90	3,074.90
	* FOR THE RATE ON COMPACTED VOLUME, INCREASE THE LOOSE VOLUME RATE BY 42%. IF MEASUREMENT IS ON END PRODUCT, PILING COST OF AGGREGATE AS PER A1-018 SHALL BE DEDUCTED.				
	** NOTE : THIS ITEM M1-013 ON MANUAL LABOUR SHOULD BE ADOPTED ON APPROVAL BY PD /CE FOR SMALL WORKS ONLY. WHEN MACHINERY IS USED FOR SPREADING AND COMPACTION, M1-012A / M1-013A SHALL BE ADOPTED DEPENDING ON SITE SITUATION.				
M1-013A	SPREADING WATERING AND COMPACTING GRADED 37.5 MM AGGREGATE IN STRIPS, AVERAGE WIDTH NOT EXCEEDING 1.2 METERS TO FORM A DENSE AGGREGATE BASE USING MACHINERY INCLUDING MOTOR GRADER & ROLLER HIRE CHARGES (TRANSPORT OF AGGREGATES TO BE PAID SEPARATELY) (LOOSE VOLUME)[SSCM 405.1]:	CU.M *	2,770.00	52.50	2,717.50
	* FOR THE RATE ON COMPACTED VOLUME, INCREASE THE LOOSE VOLUME RATE BY 42%. IF MEASUREMENT IS ON END PRODUCT, PILING COST OF AGGREGATE AS PER A1-018 SHALL BE DEDUCTED.				

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HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION VII =====					
ROAD SURFACE TREATMENT -----					
(SAND TRANSPORT UP TO 16 KM INCLUDED IN THE RATES. TRANSPORT OF BITUMEN EMULSION / BITUMEN TO BE PAID SEPARATELY.) -----					
S1-001	BITUMEN(80/100) SURFACING FIRST COAT USING 2 LTR/SQ.M INCLUDING BLINDING WITH SAND AT THE RATE OF 125 SQ.M/CU.M [SSCM 503.1] :	SQ.M	266.40	45.77	220.63
S1-002	BITUMEN(80/100) SURFACING FIRST COAT, USING 2 LTR/SQ.M, INCLUDING BLINDING WITH GRAVEL WHERE SAND IS NOT AVAILABLE WITHIN 16 KM. :	SQ.M	240.60	45.77	194.83
S1-003	DOUBLE BITUMENOUS SURFACE TREATMENT WITH HOT BITUMEN (MANUAL) INCLUDING INTERNAL TRANSPORT (BINDER AND AGGREGATE PAID SEPARATELY) [SSCM 505.b1 - 505.b5 & TABLE 505-b1]:	SQ.M	221.00	71.51	149.49
S1-004	SINGLE BITUMENOUS SURFACE TREATMENT WITH HOT BITUMEN (MANUAL) INCLUDING INTERNAL TRANSPORT (BINDER AND AGGREGATE PAID SEPARATELY) [SSCM 505.b1 - 505.b5 & TABLE 505-b1]:	SQ.M	116.10	40.32	75.78
S1-005	DOUBLE BITUMENOUS SURFACE TREATMENT WITH EMULSION(CRS-2)(MANUAL) INCLUDING INTERNAL TRANSPORT (BINDER AND AGGREGATE PAID SEPARATELY):	SQ.M	217.85	71.51	146.34
S1-006	SINGLE BITUMENOUS SURFACE TREATMENT WITH EMULSION(CRS-2)(MANUAL) INCLUDING INTERNAL TRANSPORT (BINDER AND AGGREGATE PAID SEPARATELY):	SQ.M	113.60	40.32	73.28
S1-007	BITUMEN(80/100) SURFACING SUBSEQUENT COAT USING 0.75 LTR/SQ.M INCLUDING BLINDING WITH SAND @ 125 SQ.M/CU.M [SSCM 503.1 (b)] :	SQ.M	141.00	28.83	112.17
S1-008	BITUMEN(80/100) SURFACING 1ST/SUBSEQUENT COAT USING 1.0 LTR/SQ.M INCLUDING BLINDING AT THE RATE OF 125 SQ.M/CU.M (NEW WORK)[SSCM 503.1(b)] :	SQ.M	162.50	28.83	133.67
S1-009	BITUMEN(80/100) SURFACING SUBSEQUENT COAT USING 0.75 LTR/SQ.M INCLUDING BLINDING WITH GRAVEL FREE OF CLAY WHERE SAND IS NOT AVAILABLE WITHIN 16 KM [SSCM 503.2(b)]:	SQ.M	115.25	28.83	86.42
S1-010	BITUMEN(80/100) SURFACING 1ST/SUBSEQUENT COAT USING 1 LTR/SQ.M INCLUDING BLINDING WITH GRAVEL FREE OF CLAY WHERE SAND IS NOT AVAILABLE WITHIN 16 KM (NEW WORK) [SSCM 503.3(c)] :	SQ.M	136.75	28.83	107.92
S1-011	BITUMEN EMULSION(CRS-1) SURFACE TREATMENT 1ST COAT WITH 3.5 LTR/SQ.M INCLUDING BLINDING WITH SAND, @ 125 SQ.M/CU.M (MANUAL):	SQ.M	336.95	26.41	310.54

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
S1-012	BITUMEN EMULSION(CRS-1) SURFACE TREATMENT 1ST COAT WITH 3.5 LTR/SQ.M (USING TROLLEY, EMULSION), INCLUDING BLINDING WITH SAND, @ 125 SQ.M/CU.M :	SQ.M	322.55	10.96	311.59
S1-013	BITUMEN EMULSION(CRS-1) SURFACE TREATMENT SUBSEQUENT COAT USING 0.75 LTR/SQ.M, INCLUDING BLINDING WITH SAND @ 125 SQ.M/CU.M (MANUAL) :	SQ.M	114.45	11.90	102.55
S1-014	BITUMEN EMULSION(CRS-1) SURFACE TREATMENT SUBSEQUENT COAT WITH 0.75 LTR/SQ.M (USING TROLLEY, EMULSION), INCLUDING BLINDING WITH SAND @ 125 SQ.M PER CU.M :	SQ.M	109.25	5.45	103.80
S1-015	TACK COAT USING BITUMEN EMULSION(CSS-1) @ THE RATE OF 0.5 LTR/SQ.M INCLUSIVE OF BRUSHING, CLEANING ROAD SURFACE AND COST OF BITUMEN EMULSION (MANUAL) [SSCM 502.3]:	SQ.M	54.25	15.01	39.24
S1-016	TACK COAT USING BITUMEN EMULSION(CSS-1) @ THE RATE OF 0.5 LTR/SQ.M INCLUSIVE OF BRUSHING, CLEANING ROAD SURFACE AND COST OF BITUMEN EMULSION (MANUAL) [SSCM 502.3]:	LITRE	108.50	30.02	78.48
S1-017	TACK COAT USING BITUMEN EMULSION(CSS-1) @ THE RATE OF 0.75 LTR/SQ.M INCLUSIVE OF BRUSHING, CLEANING ROAD SURFACE AND COST OF BITUMEN EMULSION (MANUAL) [SSCM 502.1-503.3]:	SQ.M	73.65	15.01	58.64
S1-018	TACK COAT WITH CUT BACK BITUMEN(MC 30) USING 0.5 LTR/SQ.M. INCLUDING BRUSHING AND CLEANING ROAD SURFACE (MANUAL):	SQ.M	78.40	29.53	48.87
S1-019	DELETED				
S1-020	TACK COAT WITH CUT BACK BITUMEN(80/100) USING 0.75 LTR/SQ.M INCLUDING BRUSHING AND CLEANING ROAD SURFACE (MANUAL)[SSCM 502.4] :	SQ.M	102.05	29.53	72.52
S1-021	ROLLING OVER BLINDING MATERIAL SPREAD OVER SUBSEQUENT BITUMEN SURFACING USING DIESEL ROLLER (8-10 TONS) [SSCM 502.4]:	SQ.M	11.00	-	11.00
S1-022	PRIME COAT WITH BITUMEN EMULSION(CSS-1) USING 1 LTR/SQ.M INCLUDING BLINDING WITH SAND AT THE RATE OF 250 SQ.M/CU.M AND BRUSHING CLEANING AND MOISTENING ROAD SURFACE :	SQ.M	118.60	17.23	101.37
S1-023	PRIME COAT WITH BITUMEN EMULSION(CSS-1) USING 1 LTR/SQ.M WITHOUT BLINDING, BUT INCLUSIVE OF BRUSHING, CLEANING AND MOISTENING ROAD SURFACE :	SQ.M	93.35	15.01	78.34
S1-024	PRIME COAT WITH CUT BACK BITUMEN(MC 30) USING 1 LTR/SQ.M INCLUDING BLINDING WITH SAND AT THE RATE OF 250 SQ.M/CU.M AND BRUSHING, CLEANING AND MOISTENING ROAD SURFACE:	SQ.M	152.00	31.75	120.25

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
S1-025	PRIME COAT WITH CUT BACK BITUMEN(MC 30) USING 1 LTR/SQ.M WITHOUT BLINDING BUT INCLUSIVE OF BRUSHING, CLEANING, AND MOISTENING ROAD SURFACE.:	SQ.M	126.10	29.53	96.57
S1-026	SWEEPING OVER TARRED SURFACE TO ARREST BLEEDING :	SQ.M	4.65	4.44	0.21
S1-027	APPLICATION OF BITUMEN EMULSION FOR SURFACE TREATMENT USING CRS - 1 (USING PLANT) "RATE PER LITRE"	LITRE	86.65	3.70	82.95
S1-028	BLINDING THE BITUMEN SURFACING WITH SAND AT THE RATE OF 125 SQ.M PER 1 CU.M USING MATERIAL FROM STOCK PILE:	SQ.M	51.55	3.85	47.70
S1-029	SINGLE BITUMINOUS SURFACE TREATMENT WITH BITUMEN EMULSION(CRS-2) USING PLANT. (BINDER AND AGGREGATE PAID SEPARATELY) (RATE TO INCLUDE TRANSPORT COST OF AGGREGATE UP TO 16 KMS) [SSCM-505.3(d)]:	SQ.M	72.60	9.54	63.06
S1-030	DOUBLE BITUMINOUS SURFACE TREATMENT WITH BITUMEN EMULSION(CRS-2) USING PLANT. (BINDER AND AGGREGATE PAID SEPARATELY) (RATE TO INCLUDE TRANSPORT COST OF AGGREGATE UP TO 16 KMS) [SSCM-505.3(e)]:	SQ.M	149.40	19.08	130.32
S1-030A	DELETED				
S1-030B	DOUBLE BITUMINOUS SURFACE TREATMENT WITH HOT BITUMEN(80/100) USING 19 MM AND 9.5 MM SINGLE SIZE SELECTED AGGREGATES ON EXISTING BITUMINOUS SURFACES USING PLANT. RATE TO INCLUDE ALL LABOUR, MATERIAL, PLANT AND TRANSPORT COST OF AGGREGATE UP TO 16 KM. (TRANSPORT OF BINDER AND ADDITIONAL TRANSPORT OF AGGREGATE TO BE PAID SEPARATELY)[SSCM 505b.5(e)]:	SQ.M	418.05	19.08	398.97
NOTE: QUANTITIES OF AGGREGATES AND BINDER (PEN GRADE BITUMEN) FOR DBST [SSCM 505.3]					
		AGGREGATE	BINDER		
		CU.M/100 M ²	LTR/SQ.M		
	1ST SEAL 19 MM AGGREGATE - BINDER PENGRADE BITUMEN	1.3 - 1.7	0.65-0.85		
	2ND SEAL 12.5 MM AGGREGATE - BINDER PENETRATION GRADE BITUMEN	0.7-1.0	1.0-1.3		
	1ST SEAL 12.5 MM AGGREGATE - BINDER PENGRADE BITUMEN	1.0 - 1.3	0.5-0.7		
	2ND SEAL 9.5 MM AGGREGATE - BINDER PENETRATION GRADE BITUMEN	0.55-0.75	0.75-1.05		

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
S1-031	SUPPLY, LAY AND COMPACT ASPHALT CONCRETE (19 MM, 60/70 BINDER 4.7% **) - DENSE (PLANT MADE) IN WEARING SURFACE OF SMALL WORKS SUCH AS BRIDGE DECKING, REINSTATEMENT OF TRENCHES ETC. (SUPPLY AND TRANSPORT OF PREMIX TO BE PAID SEPARATELY.) [SSCM-506]	M.TON	11,217.10	1,300.00	9,917.10
	NOTE** (FOR BINDER CONTENTS SEE GENERAL NOTES - SECTION 29. 8				
	* AVERAGE 0.6270 CU.M OF AGGREGATE IS REQUIRED FOR 1.0 M.TON OF PREMIX.				
S1-032	LAY AND COMPACT ASPHALT CONCRETE (37.5MM, 60/70 BINDER, 3.5% **) - BOUND BASE MATERIAL (PLANT MADE) IN SMALL WORKS SUCH AS BRIDGE DECKING, REINSTATEMENT OF TRENCHES ETC. (SUPPLY AND TRANSPORT OF PREMIX TO BE PAID SEPARATELY.) [SSCM-506]	M.TON	2,405.10	1,300.00	1,105.10
	NOTE** FOR BINDER CONTENTS SEE GENERAL NOTES - SECTION 29. 8				
	* AVERAGE 0.6270 CU.M OF AGGREGATE IS REQUIRED FOR 1.0 M.TON OF PREMIX.				
S1-033	LAY AND COMPACT CUTBACK ASPHALT CONCRETE COLD MIX WITH MC30 (19 MM AGGREGATE, 15% CUT BACK 60/70 BINDER 5.5%**) DENSE (PLANT MADE) IN SMALL WORKS SUCH AS BRIDGE DECKING, REINSTATEMENT OF TRENCHES ETC. (SUPPLY AND TRANSPORT OF PREMIX TO BE PAID SEPARATELY.) [SSCM-507]	M.TON	2,405.10	1,300.00	1,105.10
	NOTE** (FOR BINDER CONTENTS SEE GENERAL NOTES - SECTION 29. 8				
	* AVERAGE 0.6270 CU.M OF AGGREGATE IS REQUIRED FOR 1.0 M.TON OF PREMIX.				
S1-033A	LAY AND COMPACT EMULSIFIED ASPHALT COLD MIX WITH EMULSION CSS-1(6.67%** BY WGT OF AGG.) AND 19 MM AGGREGATE, DENSE (PLANT MADE) IN SMALL WORKS SUCH AS BRIDGE DECKING, REINSTATEMENT OF TRENCHES ETC. [TRANSPORT OF PREMIX(COLD MIX) TO BE PAID SEPARATELY.] [SSCM-507]	M.TON	10,762.10	1,300.00	9,462.10
	NOTE** (FOR BINDER CONTENTS SEE GENERAL NOTES - SECTION 29. 8				
	* AVERAGE 0.6270 CU.M OF AGGREGATE REQUIRED FOR 1.0 M.TON OF PREMIX.				
S1-034	LAY AND COMPACT ASPHALT CONCRETE USING PAVER.(COST OF SUPPLY AND TRANSPORT OF PREMIX TO BE PAID SEPARATELY.) :	M.TON	1,317.20	324.88	992.33
S1-034A	LAY AND COMPACT ASPHALT CONCRETE MANUALLY.(COST OF SUPPLY AND TRANSPORT OF PREMIX TO BE PAID SEPARATELY.) :	M.TON	1,178.45	810.00	368.45
S1-035	SURFACING (SAND SEALING - MANUAL) USING BITUMEN EMULSION CRS-1, AT THE RATE OF 1 LTR/SQ.M INCLUDING PREPARING SURFACE, BLINDING WITH SAND AT THE RATE OF 4 CU.M/500 SQ.M AND PRESSING WITH IMPROVISED HAND ROLLERS : (PATCING POT HOLES IF NECESSARY & EXTERNAL TRANSPORT TO PAY SEPARATELY.)	SQ.M	137.75	11.90	125.85
S1-035A	PATCHING MINOR POT HOLES USING SAND, BITUMEN EMULSION MIX 1:8 WHERE NECESSARY, PRIOR TO SAND SEALING	SQ.M	19.60	9.68	9.92

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CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
S1-036*	SAND SEALING WITH BITUMEN EMULSION CRS-1 AT THE RATE OF 1 LTR/SQ.M USING PLANT, INCLUDING BRUSHING, CLEANING BLINDING WITH SAND AT THE RATE OF 125 SQ.M/CU.M AND ROLLING WITH PNEUMATIC ROLLER & INTERNAL TRANSPORT [SSCM 504]: (PATCHING POT HOLES IF NECESSARY & EXTERNAL TRANSPORT TO PAY SEPARATELY.)	SQ.M	#REF!	9.07	#REF!
* NOTE :	THE ABOVE RATE IS APPLICABLE FOR PAYMENT ONLY IF CHIP SPREADER(SELF PROPELLED) AND PNEUMATIC ROLLER ARE USED FOR THE CONSTRUCTION. OTHERWISE APPROVED SSR SHOULD BE ADOPTED.				
S1-036A*	CHIP SEALING WITH BITUMEN EMULSION CRS-1 AT THE RATE OF 1.25 LTR/SQ.M USING PLANT, INCLUDING BRUSHING, CLEANING BLINDING) (PATCHING POT HOLES IF NECESSARY & EXTERNAL TRANSPORT TO PAY SEPARATELY.)	SQ.M	170.20	5.38	164.83
S1-036B*	FOG SEALING WITH BITUMEN EMULSION CRS-1 AT THE RATE OF 1.5 LTR/SQ.M USING PLANT, INCLUDING BRUSHING, CLEANING BLINDING) (PATCHING POT HOLES IF NECESSARY & EXTERNAL TRANSPORT TO PAY SEPARATELY.)	SQ.M	197.35	5.38	191.98
S1-036C*	CRACK SEALING WITH BITUMEN EMULSION CSS-1 AT THE RATE OF 1.25 LTR/SQ.M USING PLANT, INCLUDING BRUSHING, CLEANING BLINDING) (PATCHING POT HOLES IF NECESSARY & EXTERNAL TRANSPORT TO PAY SEPARATELY.)	SQ.M	175.70	5.38	170.33
S1-037	RECONSTRUCT BASE WITH PENETRATION MACADAM USING NOMINAL SIZE 50 MM AGGREGATE AND 19 MM KEY AGGREGATE FROM STOCK PILES, TO A COMPACTED THICKNESS OF 75 MM, ON EXISTING PAVEMENTS. [SSCM 406] (COST OF BINDER, AND AGGREGATE INCLUDING TRANSPORT TO BE PAID SEPARATELY) :	SQ.M	158.35	85.56	72.79
S1-038	RECONSTRUCT BASE WITH PENETRATION MACADAM USING NOMINAL SIZE 37.5 MM AGGREGATE AND 12.5 MM KEY AGGREGATE FROM STOCK PILES, TO A COMPACTED THICKNESS OF 75 MM, ON EXISTING PAVEMENTS. [SSCM 406] (COST OF BINDER, AND AGGREGATE INCLUDING TRANSPORT TO BE PAID SEPARATELY) :	SQ.M	111.35	60.77	50.58
S1-039	CORRECTION OF CORRUGATIONS, DEPRESSIONS AND CAMBERING ROAD SURFACES USING ASPHALT CONCRETE COMPACTED BY VIBRATING ROLLER INCLUDING INTERNAL TRANSPORT. (APPLICATION OF TACK COAT AND SUPPLY OF ASPHALT CONCRETE TO BE PAID SEPARATELY) :	M.TON	2,214.10	1,333.33	880.77
S1-040*	SAND SEALING WITH BITUMEN EMULSION CRS-2 AT THE RATE OF 1.0 LTR/SQ.M USING PLANT, AND BLINDING WITH SAND AT THE RATE OF 125 SQ.M/CU.M ON D.B.S.T / S.B.S.T. (TRIPLE SEAL) INCLUDING INTERNAL TRANSPORT(SSCM 504) (BINDER TRANSPORT TO SITE SHALL BE PAID SEPARATELY)	SQ.M	155.60	7.50	148.10
* NOTE :	THIS ITEM SHOULD BE USED ONLY FOR SAND SEALING ON ROAD SURFACE AFTER D.B.S.T. / S.B.S.T. WORK AND USE OF <u>PNEUMATIC ROLLER IS ESSENTIAL</u> . IF EMULSION AND/OR THE RATE OF APPLICATION OR THE METHOD OF SAND SPREADING TO BE CHANGED, S.S.R. SHALL BE PREPARED AND APPROVED.				
S1-041	SLURRY SEALING TO A THICKNESS OF 6 MM, USING MACHINERY WITH EMULSION (USING CSS-1H) AS THE BINDER (TRANSPORT OF AGGREGATE TO PAY SEPARATELY:	SQ.M	150.15	5.33	144.82
S1-042	SLURRY SEALING TO A THICKNESS OF 6 MM USING CONCRETE MIXTURE,MANUAL WITH EMULSION (USING CSS/ CSS-1H) AS THE BINDER (TRANSPORT OF AGGREGATE TO PAY SEPARATELY):	SQ.M	654.05	120.00	534.05

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION VIII =====					
ROAD SURFACE MAINTENANCE -----					
INTERNAL TRANSPORT OF HOT BITUMEN UP TO 16 KM AND SAND TRANSPORT UP TO 16 KM INCLUDED IN THE RATES. -----					
MN1-001	PATCHING WITH HOT BITUMEN(60/70) USING 14 LITRES PER 1/2 KM (SSCM 1102.1 - 1102.3):	1/2 KM	3,176.70	1,154.30	2,022.40
MN1-002	PATCHING WITH HOT BITUMEN(60/70) USING 21 LTRS. PER 1/2 KM.:	1/2 KM	4,765.05	1,731.45	3,033.60
MN1-003	PATCHING WITH HOT BITUMEN(60/70) USING 28 LTRS. PER 1/2 KM.:	1/2 KM	6,353.40	2,308.59	4,044.81
MN1-004	PATCHING WITH HOT BITUMEN(60/70) USING 35 LTRS. PER 1/2 KM.:	1/2 KM	7,941.75	2,885.74	5,056.01
MN1-005	PATCHING WITH HOT BITUMEN(60/70) USING 42 LTRS. PER 1/2 KM.:	1/2 KM	9,530.10	3,462.89	6,067.21
MN1-006	PATCHING WITH HOT BITUMEN(60/70) USING 49 LTRS. PER 1/2 KM.:	1/2 KM	11,118.45	4,040.04	7,078.41
MN1-007	PATCHING WITH HOT BITUMEN(60/70) USING 56 LTRS. PER 1/2 KM.:	1/2 KM	12,706.80	4,617.19	8,089.61
MN1-008	EXTENSIVE PATCHING FOR EVERY ADDITIONAL 7 LTRS. HOT BITUMEN(60/70)	1/2 KM	1,588.35	577.15	1,011.20
MN1-009	PATCHING WITH BITUMEN EMULSION (CRS-1) USING 14 LTRS PER 1/2 KILO METRE:	1/2 KM	2,319.10	486.33	1,832.77
MN1-010	PATCHING WITH BITUMEN EMULSION CRS-1 USING 21 LTRS. PER 1/2 KM.:	1/2 KM	3,478.70	729.49	2,749.21
MN1-011	PATCHING WITH BITUMEN EMULSION CRS-1 USING 28 LTRS. PER 1/2 KM.:	1/2 KM	4,638.25	972.66	3,665.59
MN1-012	PATCHING WITH BITUMEN EMULSION CRS-1 USING 35 LTRS. PER 1/2 KM.:	1/2 KM	5,797.80	1,215.82	4,581.98
MN1-013	PATCHING WITH BITUMEN EMULSION CRS-1 USING 42 LTRS. PER 1/2 KM.:	1/2 KM	6,957.35	1,458.98	5,498.37
MN1-014	PATCHING WITH BITUMEN EMULSION CRS-1 USING 49 LTRS. PER 1/2 KM.:	1/2 KM	8,116.90	1,702.15	6,414.75

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CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
MN1-015	PATCHING WITH BITUMEN EMULSION, CRS-1 USING 56 LTRS. PER 1/2 KM.:	1/2 KM	9,276.50	1,945.31	7,331.19
MN1-016	EXTENSIVE PATCHING FOR EVERY ADDITIONAL 7 LTRS. BITUMEN EMULSION, CRS-1 :	1/2 KM	1,159.55	243.16	916.39
MN1-017	50 MM - 19.5 MM AGGREGATE ROLLER PATCHING:	CU.M	4,239.05	2,435.29	1,803.76
MN1-018	50 MM - 19.5 MM AGGREGATE STAMPED PATCHING:	CU.M	5,137.70	4,964.79	172.91

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION IX					
=====					
ROAD SIDE AND DRAINAGE SYSTEM (SSCM 701.3)					

(* RATE TO INCLUDE SPREADING THE RESULTING MATERIALS SUITABLY IN THE VICINITY UNLESS OTHERWISE DIRECTED.)					

DR1-001	CUTTING NEW SIDE DRAINS IN ORD. SOIL :*	CU.M	841.25	781.80	59.45
DR1-002	CUTTING NEW SIDE DRAINS IN MED. SOIL :*	CU.M	1,167.25	1099.82	67.43
DR1-003	CUTTING NEW SIDE DRAINS IN HARD SOIL :*	CU.M	1,493.20	1417.84	75.36
DR1-004	CUTTING NEW SIDE DRAINS IN SOFT ROCK :*	CU.M	1,656.20	1576.86	79.34
DR1-005	CUTTING NEW SIDE DRAINS IN UNCLASSIFIED SOIL :*	CU.M	1,167.25	1099.82	67.43
DR1-005A	CUTTING SIDE DRAINS OF STD. DIMENSIONS IN UNCLASSIFIED SOIL USING (BACK HOE J.C.B.) INCLUDING SHAPING, TRIMMING AND LEVELLING BOTTOM MANUALLY.	CU.M	598.20	317.34	280.86
DR1-006	CUTTING NEW SIDE DRAINS IN ROCK :*	CU.M	3,186.35	2866.61	319.74
DR1-007	TURFING (EXCLUDING ROYALTY, TRANSPORT AND WATERING AND MAINTENANCE) [SSCM 802.3a]:	SQ.M	182.60	173.68	8.92
DR1-008	WATERING AND MAINTAINING TURF FOR THREE MONTHS INCLUDING TRANSPORT OF WATER :	SQ.M	235.50	138.60	96.90
DR1-009	LEVELLING & TRIMMING EARTH :*	SQ.M	24.05	22.30	1.75
DR1-010	CLEARING SILT ETC. FROM KERBS & CHANNELS (SSCM 12053) :*	L.M	14.45	13.75	0.70
DR1-011	CUTTING SCUPPER DRAINS ON ANY SOIL OTHER THAN ROCK TO AN AVERAGE WIDTH OF .75 METRE, WITH PROPER GRADIENT AND AN AVERAGE DEPTH OF 100 MM (S.S.C.M. 1304.3) :*	L.M	104.95	100.00	4.95
DR1-012	CLEANING AND DESILTING OF CULVERTS (SSCM 1303.3) :*	NO.	296.70	275.00	21.70

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
DR1-013	CLEANING CHOKED CULVERTS (WITH HEAD ROOM > 1 M **) :* ** IF THE CULVERT HEAD ROOM IS LESS THAN 1 METRE, WORK SHALL BE CARRIED OUT ON DAY WORKS BASIS.	CU.M	1,226.60	1166.08	60.52
DR1-014	CLEANING DESILTING EXISTING SIDE DRAINS AND LEAD UP DRAINS TO PROPER SHAPE AND GRADIENT AND TRANSPORT OF EXCAVATED MATERIALS FROM ROAD SIDE UP TO 100 M. :*	L.M	36.30	34.39	1.91
DR1-015	CLEARING INLETS AND OUTLETS OF CULVERTS :*	NO.	267.00	247.50	19.50

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION X =====					
BRIDGES, CULVERTS & RETAINING WALLS ETC. -----					
ST1-001	DEMOLISHING DRY COURSED MASONRY INCLUDING STACKING OR LOADING. [SSCM 202.2]:	CU.M	3,640.00	3,551.24	88.76
ST1-002	DEMOLISHING COURSED MASONRY IN CEMENT MORTAR INCLUDING STACKING OR LOADING.:	CU.M.	4,237.65	4,134.28	103.37
ST1-003	DEMOLISHING RANDOM RUBBLE MASONRY IN CEMENT MORTAR INCLUDING STACKING OR LOADING.:	CU.M	1,901.50	1,855.12	46.38
ST1-004	RANDOM RUBBLE MASONRY, 150-225 MM RUBBLE IN CEMENT SAND MORTAR 1:6 (EXCLUDING TRANSPORT OF RUBBLE & PILING) [SSCM 1006.3]:	CU.M	12,067.95	6,148.41	5,919.54
ST1-005	RANDOM RUBBLE MASONRY, 150-225 MM RUBBLE IN CEMENT SAND MORTAR 1:5 (EXCLUDING TRANSPORT OF RUBBLE & PILING) [SSCM 1006.3]:	CU.M	12,364.60	6,148.41	6,216.19
ST1-006	RANDOM RUBBLE MASONRY IN CEMENT SAND MORTAR 1:6 WITH AVAILABLE RUBBLE 150-225 MM :	CU.M	10,070.95	6,148.41	3,922.54
ST1-007	RANDOM RUBBLE MASONRY IN CEMENT SAND MORTAR 1:5 WITH AVAILABLE RUBBLE 150-225 MM :	CU.M	10,367.55	6,148.41	4,219.14
ST1-008	DRY MASONRY WITH AVAILABLE HEAVY RUBBLE OR BOULDERS (SSCM 1006.3 (B):	CU.M	5,523.40	5,388.69	134.71
ST1-009	DRY RANDOM MASONRY WITH RUBBLE 150-225 MM (EXCLUDING TRANSPORT OF RUBBLE & PILING):	CU.M	6,235.95	4,310.95	1,925.00
ST1-010	DRY RANDOM MASONRY WITH AVAILABLE RUBBLE 150-225 MM:	CU.M	4,418.75	4,310.95	107.80
ST1-011	PACKING AVAILABLE RUBBLE AND AGGREGATE FILTER LAYERS BEHIND MASONRY WALLS:	CU.M	1,077.20	1,020.32	56.88
ST1-012	CLAY PUDDLED & LAID BEHIND MASONRY WALLS (EXCL. TRANSPORT OF CLAY) (SSCM 705.3):	CU.M	2,179.60	2,069.79	109.81
ST1-013	GROUTING COURSED STONE MASONRY JOINTS WITH CEMENT SAND MORTAR 1:3 (SSCM 804.2(C):	SQ.M	439.15	321.05	118.10
ST1-014	GROUTING RUBBLE PAVING WITH CONCRETE CLASS C, 1:2:4(19 MM) (EXCL. TRANSPORT OF AGGR. FOR CONCRETE & PILING):	CU.M	2,326.60	1,045.05	1,281.55
ST1-015	GROUTING RUBBLE PAVING WITH CEMENT SAND MORTAR (1:3):	SQ.M	713.65	481.58	232.07

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-016	FORMING WEEP HOLES IN MASONRY CONSTRUCTION (LABOUR ONLY) [SSCM 706.3] :	NO.	427.10	416.67	10.43
ST1-017	FORMING WEEP HOLES USING P.V.C. PIPES OF INT. DIA. NOT LESS THAN 100 MM. COMPLETE WITH DRIPLEGE AND SURROUND FINISH SMOOTH:	METRE	631.55	211.98	419.57
ST1-018	SHORING WITH 37.5 MM THICK CLASS II TIMBER PLANKS UP TO 3 M DEPTH.:	SQ.M	907.20	413.89	493.31
ST1-019	SUPPLYING & FIXING CLASS II TIMBER STRUTS ETC. FOR SHORING UP TO 3 M DEPTH.:	CU.DECI.M	78.95	64.44	14.51
ST1-020	SUPPLYING AND FIXING CLASS II TIMBER IN SHORING UP TO 3 M DEPTH	SQ.M	1,103.35	574.05	529.30
ST1-021	LIFTING SOIL FOR EVERY 1.5 M BEYOND THE INITIAL 1.5 M :	CU.M / LIFT	597.60	583.04	14.56
ST1-022	LIFTING WEDGE STONES EVERY 1.5 M BEYOND THE INITIAL 1.5 M :	CU.M / LIFT	1,792.85	1,749.12	43.73
ST1-023	LIFTING RUBBLE OR CONCRETE EVERY 1.5 M BEYOND THE INITIAL 1.5 M :	CU.M / LIFT	896.40	874.56	21.84
ST1-024	LOWERING WEDGED STONES EVERY 1.5 M BEYOND THE INITIAL 1.5 M :	CU.M / LOWER	1,195.25	1,166.08	29.17
ST1-025	LOWERING RUBBLE OR CONCRETE FOR EVERY 1.5 M BEYOND THE INITIAL 1.5 M:	CU.M / LOWER	597.60	583.04	14.56
ST1-026	RENDERING 12.5 MM THICK IN CEMENT SAND MOTAR 1:2 MIX (ROUGH):	SQ.M	707.95	491.94	216.01
ST1-027	RENDERING 12.5 MM THICK IN CEMENT SAND MORTAR 1:2 MIX (SMOOTH FINISH):	SQ.M	811.65	559.14	252.51
ST1-028	RENDERING 19 MM THICK IN CEMENT SAND MORTAR 1:2 MIX (ROUGH):	SQ.M	984.85	655.91	328.94
ST1-029	RENDERING 19 MM THICK IN CEMENT SAND MORTAR 1:2 MIX (SMOOTH FINISH):	SQ.M	1,088.55	723.12	365.43
ST1-030	RENDERING 12.5 MM THICK IN CEMENT SAND MORTAR 1:3 MIX (ROUGH):	SQ.M	698.95	491.94	207.01
ST1-031	RENDERING 12.5 MM THICK IN CEMENT SAND MORTAR 1:3 MIX (SMOOTH FINISH):	SQ.M	810.95	559.14	251.81
ST1-032	RENDERING 19 MM THICK IN CEMENT SAND MORTAR 1:3 MIX (ROUGH):	SQ.M	973.55	655.91	317.64

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-033	RENDERING 19 MM THICK IN CEMENT SAND MORTAR 1:3 MIX (SMOOTH FINISH):	SQ.M	1,076.30	723.12	353.18
ST1-034 *	MIXING & LAYING MANUALLY, CEMENT CONCRETE 1:4:8(50 MM) (VOLUME BATCHING) USING CRUSHER RUN AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING) (SSCM 1001.4):	CU.M	14,870.90	4,478.80	10,392.10
ST1-035 *	MIXING & LAYING USING CONCRETE MIXER, CEMENT CONCRETE 1:4:8(50 MM) (VOLUME BATCHING) USING CRUSHER RUN AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING) (SSCM 1001.8-1001.9):	CU.M	14,711.10	3,482.35	11,228.75
ST1-036 *	MIXING & LAYING MANUALLY CEMENT CONCRETE 1:4:8(50 MM) WITH 20% PLUMS(VOLUME BATCHING), USING CRUSHER RUN AGGREGATE. (EXCL. TRANSPORT OF AGGREGATE & PILING) :	CU.M	13,786.95	5,061.84	8,725.11
ST1-037 *	MIXING & LAYING USING CONCRETE MIXER, CEMENT CONCRETE 1:4:8(50 MM) WITH 20% PLUMS(VOLUME BATCHING) USING CRUSHER RUN AGGREGATE.(EXCLUDING TRANSPORT OF AGGREGATE & PILING):	CU.M	13,050.15	3,482.35	9,567.80
ST1-038 *	MIXING & LAYING MANUALLY, CEMENT CONCRETE 1:3:6(37.5 MM) WITH 20% PLUMS(VOLUME BATCHING) USING CRUSHER RUN AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING):	CU.M	14,799.50	5,061.84	9,737.66
ST1-039 *	MIXING & LAYING USING CONCRETE MIXER, CEMENT CONCRETE 1:3:6(37.5 MM) WITH 20% PLUMS(VOLUME BATCHING) USING CRUSHER RUN AGGREGATE.(EXCL.TRANSPORT OF AGGREGATE & PILING):	CU.M	14,038.00	3,482.35	10,555.65
ST1-040 *	MIXING & LAYING MANUALLY, CEMENT CONCRETE 1:3:6(37.5 MM) (VOLUME BATCHING) USING CRUSHER RUN AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING) (SSCM 1001.4):	CU.M	17,069.45	5,061.84	12,007.61
ST1-041 *	MIXING & LAYING USING CONCRETE MIXER, CEMENT CONCRETE 1:3:6(37.5 MM) (VOLUME BATCHING) USING CRUSHER RUN AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING):	CU.M	16,313.85	3,482.35	12,831.50
* NOTE: WHEN HAND BROKEN AGGREGATE(50 MM OR 37.5 MM) ARE USED, INPLACE OF CRUSHER RUN AGGREGATE, ON APPROVAL BY PD/CE SSRR TO BE PREPARED BASED ON THE SAME NORMS.					
ST1-042	MIXING & LAYING MANUALLY, CEMENT CONCRETE 1:3:6(19 MM) (VOLUME BATCHING) USING CRUSHED AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING) (SSCM 1001.4):	CU.M	16,859.50	5,061.84	11,797.66

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-043	MIXING & LAYING USING CONCRETE MIXER, CEMENT CONCRETE 1:3:6(19 MM) (VOLUME BATCHING) USING CRUSHED AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING):	CU.M	15,973.15	3,482.35	12,490.80
ST1-044 *	MIXING & LAYING MANUALLY CEMENT CONCRETE 1:2:4(37.5 MM) (VOLUME BATCHING) USING CRUSHER RUN AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING):	CU.M	18,129.30	5,061.84	13,067.46
ST1-045 *	MIXING & LAYING USING CONCRETE MIXER, CEMENT CONCRETE 1:2:4(37.5 MM) (VOLUME BATCHING) USING CRUSHER RUN AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING): **	CU.M	17,623.85	3,482.35	14,141.50
	** (RATE INCLUDES VIBRATOR COST)				
	* NOTE: WHEN HAND BROKEN AGGREGATE(50 MM OR 37.5 MM) ARE USED, INPLACE OF CRUSHER RUN AGGREGATE, ON APPROVAL BY PD/CE SSSR TO BE PREPARED BASED ON THE SAME NORMS.				
ST1-046	MIXING & LAYING MANUALLY CEMENT CONCRETE 1:2:4(19 MM) (VOLUME BATCHING) USING CRUSHER RUN AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING):	CU.M	17,742.60	5,061.84	12,680.76
ST1-047	MIXING & LAYING USING CONCRETE MIXER, CEMENT CONCRETE 1:2:4(19 MM) (VOLUME BATCHING) USING CRUSHER RUN AGGREGATE (EXCL. TRANSPORT OF AGGREGATE & PILING): **	CU.M	17,222.95	3,482.35	13,740.60
	** (RATE INCLUDES VIBRATOR COST)				
ST1-048	MIXING & LAYING USING CONCRETE MIXER (W/BATCHING), CEMENT CONCRETE GRADE 25(19 MM) USING CRUSHER RUN AGGREGATES IN FOUNDATIONS AND FLOORS. (EXCLUDING TRANSPORT OF AGGREGATE & PILING):	CU.M	18,362.60	3,482.35	14,880.25
	* SEE GENERAL NOTES: SECTION 33.7				
ST1-048A	MIXING & LAYING USING CONCRETE MIXER [W/BATCHING], CEMENT CONCRETE GRADE 25(70% 37.5 + 30% 19 MM) USING CRUSHER RUN AGGREGATES (EXCLUDING TRANSPORT OF AGGREGATE & PILING) :*	CU.M	17,328.55	3,482.35	13,846.20
	* SEE GENERAL NOTES: SECTION 33.7				
ST1-049	MIXING & LAYING USING CONCRETE MIXER (W/BATCHING) CEMENT CONCRETE GRADE 30(19 MM), WITH CRUSHER RUN AGGREGATE. (EXCLUDING TRANSPORT OF AGGREGATE & PILING):	CU.M	19,865.00	3,482.35	16,382.65
	* SEE GENERAL NOTES: SECTION 33.7				

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-050	MIXING & LAYING USING CONCRETE MIXER(W/BATCHING), CEMENT CONCRETE GRADE 40(19 MM), WITH CRUSHER RUN AGGREGATE. (EXCLUDING TRANSPORT OF AGGREGATE AND PILING):	CU.M	21,350.25	3,482.35	17,867.90
	* SEE GENERAL NOTES: SECTION 33. 7				
ST1-051	MIXING & LAYING CEMENT CONCRETE BY HAND :	CU.M	5,272.65	5,061.84	210.81
ST1-052	MIXING & LAYING CEMENT CONCRETE BY POWER DRIVEN CONCRETE MIXER V/BATCHING:	CU.M	4,522.40	3,482.35	1,040.05
ST1-053	CURING OF CONCRETE DECKS, SLABS, BEAMS, WALLS ETC. [SSCM 1011.11]:	SQ.M/DAY	30.10	8.42	21.68
ST1-054	FABRICATE & LAY M.S. BARS AS REINFORCEMENT(INCL. TRANSPORT):	KG	258.55	86.00	172.55
ST1-055	FABRICATE & LAY TOR STEEL AS REINFORCEMENT(INCL. TRANSPORT):	KG	258.75	86.00	172.75
ST1-056	CUTTING & LAYING REINFORCEMENT FABRIC (EXCLUDING COST OF REINFORCEMENT FABRIC):	SQ.M	239.45	232.43	7.02
ST1-057	SUPPLYING & FIXING 25 MM THICK PLANKS OF CLASS II TIMBER AS SHUTTERING, INCLUDING REMOVING [SSCM 1008.3 (b)]:	SQ.M	1,115.25	446.24	669.01
ST1-057A	SUPPLYING & FIXING 25 MM THICK PLANKS OF CLASS II TIMBER AS SHUTTERING FOR CONCRETE ROADS AND CURB FOR INTERLOCKING BLOCK PAVING ROADS INCLUDING REMOVING [SSCM 1008.3 (b)]:	SQ.M	578.35	177.42	400.93
ST1-058	SUPPLYING & FIXING CLASS II TIMBER BEARERS, JOISTS, ETC. INCLUDING DISMANTLING IN SHUTTERING . [SSCM 1008.3(a)]:	CU.DECI M.	60.55	43.99	16.56
ST1-059	100 - 150 MM DIA. ROUND JUNGLE TIMBER SUPPLIED & FIXED AS PROPS.:	METRE	96.80	85.04	11.76
ST1-060	150 - 200 MM DIA. ROUND JUNGLE TIMBER SUPPLIED & FIXED AS PROPS.:	METRE	105.70	85.04	20.66
ST1-061	FORMWORK SMOOTH FINISH WITH CLASS II TIMBER FOR BRIDGE BEAMS, BRIDGE DECK UNDER SIDES AND SIDES INCLUDING DISMANTLING. [SSCM 1008.3(B)]:	SQ.M	2,729.15	1,407.10	1,322.05
ST1-062	FORMWORK SMOOTH FINISH WITH CLASS II TIMBER FOR BRIDGE COLUMN SHAFTS INCLUDING DISMANTLING. [SSCM 1008.3(b)]:	SQ.M	2,508.85	1,423.61	1,085.24
ST1-063	FORMWORK SMOOTH FINISH USING PLYWOOD (SHUTTER 15 MM) AND CLASS II TIMBER BEARERS,JOISTS AND JUNGLE TIMBER PROPS FOR BRIDGE ABUTMENTS, WINGWALLS ETC.:	SQ.M	2,717.55	1,991.50	726.05

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-064	SUPPLYING & FIXING 25 MM THICK PLANKS AND STRUTS OF CLASS II TIMBER AS FORMWORK ROUGH FINISH, IN FOUNDATION ETC. INCLUDING REMOVING.[SSCM 1008.3(b)]:	SQ.M	1,277.65	745.06	532.59
ST1-065	FORMWORK SMOOTH FINISH FOR GENERAL PURPOSES, USING 25 MM THICK PLANKS & STRUTS OF CLASS II TIMBER AND ROUND JUNGLE TIMBER PROPS 100-150 MM DIA., INCLUDING DISMANTLING :	SQ.M	1,758.65	1,070.47	688.18
ST1-066	LAYING & JOINTING 153 MM DIA. CONCRETE PIPES (TRANSPORT AND BEDDING MATERIAL PAID SEPARATELY) [SSCM 707.3(C)-707.4]:	METRE	2,193.40	692.17	1,501.23
ST1-067	LAYING & JOINTING 229 MM DIA. CONCRETE PIPES (TRANSPORT AND BEDDING MATERIAL PAID SEPARATELY) [SSCM 707.3(C)-707.4]:	METRE	3,165.45	717.21	2,448.24
ST1-068	LAYING & JOINTING 305 MM DIA. CONCRETE PIPES (TRANSPORT AND BEDDING MATERIAL PAID SEPARATELY) [SSCM 707.3(C)-707.4]:	METRE	3,371.40	778.69	2,592.71
ST1-069	LAYING & JOINTING 450 MM DIA. CONCRETE PIPES (TRANSPORT AND BEDDING MATERIAL PAID SEPARATELY) [SSCM 707.3(C)-707.4]:	METRE	4,547.10	778.69	3,768.41
ST1-070	LAYING & JOINTING 610 MM DIA. CONCRETE PIPES (TRANSPORT AND BEDDING MATERIAL PAID SEPARATELY) [SSCM 707.3(C)-707.4]:	METRE	6,780.90	1,557.38	5,223.52
ST1-071	LAYING & JOINTING 914 MM DIA. CONCRETE PIPES (TRANSPORT AND BEDDING MATERIAL PAID SEPARATELY) [SSCM 707.3(C)-707.4]:	METRE	11,489.95	2,493.17	8,996.78
ST1-072	LAYING & JOINTING 1219 MM DIA. CONCRETE PIPES (TRANSPORT AND BEDDING MATERIAL PAID SEPARATELY) [SSCM 707.3(C)-707.4]:	METRE	17,131.40	3,497.27	13,634.13
ST1-073	LAYING & JOINTING 153 MM DIA. AVAILABLE CONCRETE PIPES AND COLLARS:	METRE	715.75	692.17	23.58
ST1-074	LAYING & JOINTING 229 MM DIA. AVAILABLE CONCRETE PIPES WITH COLLARS :	METRE	761.30	717.21	44.09
ST1-075	LAYING & JOINTING 305 - 450 MM DIA. AVAILABLE CONCRETE PIPES AND COLLARS :	METRE	824.30	778.69	45.61
ST1-076	LAYING & JOINTING 610 MM DIA. AVAILABLE CONCRETE PIPES AND COLLARS :	METRE	1,622.45	1,557.38	65.07
ST1-077	LAYING & JOINTING 914 MM DIA. AVAILABLE CONCRETE PIPES AND COLLARS :	METRE	2,726.95	2,493.17	233.78

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CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-078	LAYING & JOINTING 1219 MM DIA. AVAILABLE CONCRETE PIPES AND COLLARS :	METRE	3,891.10	3,497.27	393.83
ST1-079	FIXING NEW BRIDGE PLANKS RUNNERS AND STACKING OLD PLANKS AVAILABLE [SSCM 1402.2(a)]:	NO.	990.85	966.67	24.18
ST1-080	REMOVING & RE-SETTING OLD BRIDGE PLANKS.:	NO.	619.25	604.17	15.08
ST1-081	SUPPLYING & FIXING NEW BRIDGE PLANKS OF CLASS I TIMBER.:	CU.DECI M.	119.00	17.61	101.39
ST1-082	SUPPLYING & FIXING 31 MM THICK DECK PLANKS OF CLASS I TIMBER.:	SQ.M	5,020.00	1,844.44	3,175.56
ST1-083	FIXING NEW CHEQUERED OR M.S. PLATES ON TIMBER - DECKED BRIDGE.[SSCM 1402.2(d)]:	METRE	1,461.90	1,426.23	35.67
ST1-084	REMOVING & REFIXING CHEQUERED M.S. PLATES ON TIMBER - DECKED BRIDGE.:	METRE	1,949.20	1,901.64	47.56
ST1-085	TIGHTENING BOLTS & NUTS OF CHEQUERED OR M.S. PLATES.:	METRE	289.85	282.79	7.06
ST1-086	REMOVING & REFIXING 'U' CLIPS. [SSCM 1402.2(b)]:	NO.	212.70	207.50	5.20
ST1-087	CLEANING, WIRE BRUSHING & PAINTING STEELWORK, ONE COAT ENAMEL PAINT.:	SQ.M	236.95	181.65	55.30
ST1-088	CLEANING, WIRE BRUSHING & APPLYING TAR ON STEELWORK, ONE COAT :	SQ.M	195.90	181.65	14.25
ST1-089	CLEANING, WITH COTTON WASTE AND PAINTING STEEL WORK WITH ENAMEL PAINT, ONE COAT :	SQ.M	135.95	82.88	53.07
ST1-090	CHIPPING TO BARE METAL ETC. & PAINTING WITH ANTICORROSIVE PAINT, ONE COAT :	SQ.M	862.00	803.28	58.72
ST1-091	PAINTING WITH ONE COAT OF ENAMEL PAINT AFTER CLEANING, DERUSTING & APPLICATION OF ONE COAT ANTICORROSIVE PAINT. [SSCM 1401.3(c)]:	SQ.M	576.20	474.97	101.23
ST1-092	PAINTING WITH TWO COATS OF ENAMEL PAINT, AFTER CLEANING, DERUSTING & APPLICATION OF ONE COAT ANTICORROSIVE PAINT :	SQ.M	707.85	566.74	141.11
ST1-093	OILING STEEL CABLES ON SUSPENSION BRIDGES [SSCM 1405.3] :	SQ.M	740.60	387.51	353.09

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CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-094	CLEANING BOOMS OF STEEL BRIDGES INCLUDING SCAFFOLDING WHERE NECESSARY [SSCM 1401.3] :	METRE	70.75	59.02	11.73
ST1-095	DEMOLISHING UNREINFORCED CEMENT CONCRETE INCLUDING CLEANING OF DEBRIS IN FOUNDATION AND SUPER STRUCTURE IN DRY CONDITION EXCLUDING UNDER WATER STRUCTURES [SSCM 202.2] :	CU.M	3,281.45	3,109.54	171.91
ST1-096	DEMOLISHING REINFORCED CONCRETE AND DEBRIS CLEARED :	CU.M	4,675.90	4,469.96	205.94
ST1-097	DEMOLISHING REINFORCED CONCRETE IN VERY HEAVY STRUCTURES BUILD UP OF GRADE 30 ABOVE CONCRETE IN WORK SUCH AS BRIDGE BEAMS & DECK SLABS, INCLUDING COLLECTING & REMOVING :	CU.M	11,384.65	3,498.23	7,886.42
ST1-098	SUPPLYING & FIXING M.S. DOWELS, SPLICED AND DOVE TAILED WITH WEDGE AT ONE END, 16 MM DIA. AND 1 M LONG, BORING HOLES TO 0.3 M DEPTH IN FIXING :	NO	772.90	534.29	238.61
ST1-099	SUPPLYING & FIXING M.S. DOWELS, SPLICED AND DOVE TAILED WITH WEDGE AT ONE END, 20 MM DIA. AND 1 M LONG, BORING HOLES TO 0.3 M DEPTH IN FIXING :	NO	963.80	597.14	366.66
ST1-100	SUPPLYING & FIXING M.S. DOWELS, SPLICED AND DOVE TAILED WITH WEDGE AT ONE END, 25 MM DIA. AND 1 M LONG, BORING HOLES TO 0.3 M DEPTH IN FIXING :	NO	1,290.50	722.86	567.64
ST1-101	LAY STANDARD TYPE ROAD KERBS(125 MM WIDE X 900 MM LONG), SET ON 19 MM THICK 1:3 CEMENT SAND MORTAR LAYER ON 150 MM X 275 MM WIDE 1:2:4(19 MM) CONCRETE FOUNDATION WITH AVERAGE 157 MM X 150 MM WIDE BACKING WITH SAME CONCRETE INCLUDING EXCAVATION AND SHUTTERING.(COST OF KERB STONES INCLUDING TRANSPORT AND AGGREGATE* TRANSPORT TO PAY SEPARATELY) :	METRE	2,485.80	1,236.02	1,249.78
	* QUANTITY OF AGGREGATE REQUIRED FOR CONCRETING IN 1 METER LENGTH IS EQUAL TO : 0.06 CU.M				
ST1-102	LAY STANDARD PRECAST BRIDGE KERBS [TYPE DRAWING NO. T/B/106 OF RDA] (COST OF PRECAST KERBS INCLUDING TRANSPORT TO BE PAID SEPARATELY) :	METRE	533.60	505.56	28.04
ST1-103	CONSTRUCTING 150X50 MM THICK INSITU LOWER KERB IN GRADE 20(14 MM) CONCRETE FOR BRIDGES (AGGREGATE TRANSPORT TO BE PAID SEPARATELY):	METRE	287.95	155.84	132.11
ST1-104	LAYING 450 X 450 X 50 MM PRECAST CONCRETE SLABS ON ON FOOT WALKS INCLUDING AVERAGE 40 MM THICK 1:3 CEMENT MORTAR BEDDING.(COST OF PRECAST SLABS AND TRANSPORT, TO BE PAID SEPARATELY) :	SQ.M	1,701.75	990.67	711.08

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CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-105	LAYING 450 X 450 X 50 MM PRECAST CONCRETE SLABS ON ON FOOT WALKS INCLUDING AVERAGE 40 MM THICK SAND BEDDING.(COST OF PRECAST SLABS AND TRANSPORT, TO BE PAID SEPARATELY) :	SQ.M	1,180.60	910.00	270.60
ST1-106	FIXING PRECAST HAND RAILING AND UPRIGHTS USING GRADE 25(19 MM) CONCRETE INCLUDING FORMWORK FOR POCKETS.(COST OF THE PRECAST ITEMS INCLUDING TRANSPORT AND AGGREGATE* TRANSPORT, TO BE PAID SEPARATELY.) [TYPE DRAWING NO. T/B/102/B]	METRE	1,511.30	1,100.68	410.62
	* QUANTITY OF AGGREGATE REQUIRED FOR CONCRETING IN 1 METER LENGTH IS EQUAL TO : 0.017 CU.M				
ST1-107	CONSTRUCTION OF R.C.C. GRADE 25(19 MM) END PILLASTER, TYPE I (AGGREGATE* TRANSPORT AND IRON PILING TO BE PAID SEPARATELY) [TYPE DRAWING NO. T/B/106-REV 1] :	NO.	46,077.65	15,873.10	30,204.55
	* AGGREGATE QTY. REQUIRED PER PILLASTER: 37.5 MM - 0.08 CU.M 19 MM - 0.95 CU M				
ST1-108	CONSTRUCTION OF R.C.C. GRADE 25(19 MM) END PILLASTER, TYPE II (AGGREGATE* TRANSPORT AND IRON PILING TO BE PAID SEPARATELY) [TYPE DRAWING NO. T/B/106-REV 1] :	NO.	51,748.20	17,918.26	33,829.94
	* AGGREGATE QTY. REQUIRED PER PILLASTER: 37.5 MM - 0.09 CU.M 19 MM - 1.16 CU.M				
ST1-109	CONSTRUCTION OF R.C.C. GRADE 25(19 MM) END PILLASTER, TYPE III (AGGREGATE* TRANSPORT AND BUILTUP RUBBLE FOUNDATION TO BE PAID SEPARATELY) [TYPE DRAWING NO. T/B/106-REV 1] :	NO.	29,861.25	10,040.67	19,820.58
	* AGGREGATE QTY. REQUIRED PER PILLASTER: 19 MM - 0.70 CU.M				
ST1-110	CONSTRUCTION OF R.C.C. GRADE 25(19 MM) END PILLASTER, TYPE IV (AGGREGATE* TRANSPORT TO BE PAID SEPARATELY) [TYPE DRAWING NO. T/B/106-REV 1] :	NO.	31,872.05	10,708.99	21,163.06
	* AGGREGATE QTY. REQUIRED PER PILLASTER: 19 MM - 0.70 CU.M				
ST1-111	LAYING OF GRADE 20 CONCRETE PRECSAT PIN KERBS IN GRADE 20(19) CONCRETE FOUNDATION AS EDGING : (AGGREGATE TRANSPORT TO BE PAID SEPARATELY)	METRE	854.40	439.48	414.92
ST1-112	SUPPLYING AND FIXING 25 MM THICK TONGUE AND GROOVED PLANKS WITH 50 X 50 MM STRUTS OF CLASS I TIMBER IN PANELS AS SMOOTH SHUTTERING FOR CONCRETE DRAINS (12 USES) :	SQ.M	1,212.45	769.09	443.36
ST1-113	SUPPLY AND PACKING 50-200 MM DRY STONE LINING BEHIND ABUTMENTS AND WING WALLS : (AGGREGATE TRANSPORT PAID SEPARATELY)	CU.M	3,211.30	1,020.32	2,190.98

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-114	LAYING GEOTEXTILE ON PREPARED SURFACE (SUPPLY AND TRANSPORT OF GEOTEXTILE TO BE PAID SEPARATELY):	SQ.M	64.25	62.68	1.57
ST1-115	CONSTRUCTION OF GABION WALL USING 4X1X1 M MESH INCLUDING LACING WIRE ON PREPARED GROUND (SUPPLY AND TRANSPORT OF GABION MESH TO BE PAID SEPARATELY):	CU.M	5,388.55	3,792.00	1,596.55
ST1-116	CONSTRUCTION OF GABION WALL USING 4X1X.5 M MESH INCLUDING LACING WIRE ON PREPARED GROUND (SUPPLY AND TRANSPORT OF GABION MESH TO BE PAID SEPARATELY):	CU.M	5,835.85	4,228.38	1,607.48
ST1-117	CONSTRUCTION OF KERB INLET TYPE: K1 / T1 WITH COVER SLABS AS PER AS PER R.D.A. DRAWING AGGREGATE TRANSPORT TO PAY SEPARATELY.	NO.	11,108.00	3,992.15	7,115.85
* NOTE: EARTH EXCAVATION TO BE CONSIDERED BY THE ENGINEER AS PER SITE CONDITION AND ADD SEPARATELY IF REQUIRED.					
ITEMS RESERVED FOR BRIDGE WORKS ONLY					
THE RATES IN THE FOLLOWING ITEMS FROM ST1-118 TO ST1-120 SHOULD BE ADDED TO THE CONCRETE RATE SELECTED FROM ITEM CODES ST1-038 TO ST1-050, DEPENDING ON THE STRUCTURAL LOCATION.					
ST1-118	ADDITIONAL LABOUR FOR POURING, COMPACTING AND LEVELLING CONCRETE IN SCREED UNDER FOUNDATION SLAB	CU.M	912.50	912.50	0.00
ST1-119	ADDITIONAL LABOUR FOR POURING, COMPACTING CONCRETE IN ABUTMENTS, WINGWALLS, CAPPING BEAMS OF PIERS AND FOOTWALKS OF BRIDGES	CU.M	294.10	294.10	0.00
ST1-120	ADDITIONAL LABOUR FOR POURING, COMPACTING AND LEVELLING INFILLER CONCRETE BETWEEN BRIDGE BEAMS INCLUDING SCREED OF BRIDGE BEAMS	CU.M	1,369.50	1,369.50	0.00
ST1-121	LAYING READY MIXED GRADE CONCRETE INCLUDING VIBRATION* (SUPPLY OF CONCRETE TO BE PAID SEPARATELY)	CU.M	1,906.45	1,611.76	294.69
ST1-122	SUPPLYING AND LAYING APPROVED HARD RUBBER BEARING PADS 75 X12 MM OVER CAPPING BEAMS AND UNDER THE APPROACH SLABS	L.M	1,439.55	105.87	1,333.68
ST1-123	BITUMENOUS SEALING MATERIAL SUPPLIED AND LAID UNDER BEAM ENDS TO PREVENT GROUT LEAK ON TO CAPPING BEAM INCLUSIVE OF TRANSPORT OF EMULSION.	L.M	147.95	90.00	57.95
ST1-124	150 MM DIA. POLYTHENE DISPLACERS SUPPLIED AND FILLED WITH SAW DUST OR SIMILAR LIGHT MATERIAL IN DECK. TRANSPORT OF SAW DUST TO PAY SEPARATELY:	L.M	43.25	20.63	22.63
ST1-125	230 MM DIA. POLYTHENE DISPLACERS SUPPLIED AND FILLED WITH SAW DUST OR SIMILAR LIGHT MATERIAL IN DECK. (TRANSPORT OF SAW DUST TO PAY SEPARATELY).	L.M	74.65	41.25	33.40

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CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
ST1-126	325 MM DIA. POLYTHENE DISPLACERS SUPPLIED AND FILLED WITH SAW DUST OR SIMILAR LIGHT MATERIAL IN DECK. (TRANSPORT OF SAW DUST TO PAY SEPARATELY).	L.M	117.25	66.00	51.25
ST1-127	PCC BEAMS 16.15M LONG LAUNCHED INTO POSITION	BEAM	16,624.60	3,925.00	12,699.60
ST1-128	PCC BEAMS 13.41M AND 12.19M LONG LAUNCHED INTO POSITION	BEAM	11,780.95	1,137.50	10,643.45
ST1-129	PCC BEAMS 10.67M, 9.75M AND 8.23M LONG LAUNCHED INTO POSITION	BEAM	8,837.35	1,962.50	6,874.85
ST1-130	PCC BEAMS 7.01M, 6.09M, 5.18M, 4.26M AND 3.35M LONG LAUNCHED INTO POSITION	BEAM	6,759.30	1,471.88	5,287.43
ST1-131	EXPANSION JOINTS WITH M.S. ANGLE IRON AND HARD RUBBER AS PER DRAWING NO. T/B/107 REV.1	L.M	7,788.15	3,843.64	3,944.51
ST1-132	TRANSPORT OF 355 X355X9144 MM R.C.C. PILES TO THE SITE (EXCLUDING UNLOADING AND STACKING)	PER NO./KM	82.15	0.00	82.15
ST1-133	STACKING OF 355 X355X9144 MM R.C.C. PILES	NO	5,046.10	825.00	4,221.10
ST1-134	TRANSPORT OF 305 X200X6100 MM R.C.SHEET PILES TO THE SITE (EXCLUDING UNLOADING AND STACKING)	PER NO./KM	22.15	0.00	22.15
ST1-135	STACKING OF 305 X200X6100 MM R.C.SHEET PILES	NO	2,430.65	550.00	1,880.65
ST1-136	DRIVING 305 X200X6100 MM R.C.SHEET PILES USING HAND MONKEY	METRE	7,822.90	7,632.08	190.82
ST1-137	SATURATED SAND FILLING	CU.M	6,161.45	194.12	5,967.33
ST1-138	STACKING OF P.S.C.BEAM 16.15M (53' 0") LONG	BEAM	10,092.20	1,650.00	8,442.20
ST1-139	TRANSPORT OF P.S.C.BEAM 16.15M (53' 0") LONG TO THE SITE	PER BEAM /KM	164.35	0.00	164.35
ST1-140	STACKING OF P.S.C.BEAM 13.41M (44' 0") OR 12.19M (40' 0") LONG	BEAM	7,291.90	1,650.00	5,641.90
ST1-141	TRANSPORT OF P.S.C.BEAM 13.41M (44' 0") OR 12.19M (40' 0") LONG TO THE SITE	PER BEAM /KM	109.55	0.00	109.55
ST1-142	STACKING OF P.S.C.BEAM 10.63M (35' 0"), 9.75M (32' 0") OR 8.23M (27' 0") LONG	BEAM	5,468.90	1,237.50	4,231.40
ST1-143	TRANSPORT OF P.S.C.BEAM 10.63M (35' 0"), 9.75M (32' 0") OR 8.23M (27' 0") LONG TO THE SITE	PER BEAM /KM	82.15	0.00	82.15
ST1-144	STACKING OF P.S.C.BEAM 7.01M (23' 0") LONG	BEAM	3,645.95	825.00	2,820.95

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CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT -----	OTHER INPUTS -----
ST1-145	TRANSPORT OF P.S.C.BEAM 7.01M (23' 0") LONG TO THE SITE	PER BEAM /KM	54.80	0.00	54.80
ST1-146	50mm THICK COVER SLABS FOR SERVICE DUCTS IN GRADE 25(20) CONCRETE INCLUSIVE OF LIGHT REINFORCEMENT	SQ.M	2,427.75	122.22	2,305.53
ST1-147	110mm Ø TYPE 400 P.V.C. SERVICE DUCT SUPPLYING AND FIXING IN DECK	L.M	836.40	207.50	628.90
ST1-148	110mm Ø TYPE 250 P.V.C. RAIN WATER OUTLETS SUPPLIED AND FIXED THROUGH DECK	L.M	774.90	372.50	402.40
ST1-149	50mm Ø TYPE 400 P.V.C. DRAIN PIPES SUPPLIED AND FIXED THROUGH DECK	L.M	472.20	248.33	223.87
ST1-150	25mm Ø TYPE 1000 P.V.C. DRAIN PIPES SUPPLIED AND FIXED THROUGH DECK	L.M	317.55	186.25	131.30

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HSR - 2019
Engineering Division
Ministry of Highways & Road Development
and Petroleum Resources Development

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION XI =====					
KILOMETER POSTS AND GUARD STONES -----					
RF1-001	WHITE WASHING, TWO COATS TO GUIDE/GUARD STONES:	NO.	69.55	60.38	9.18
RF1-002	WHITEWASHING TWO COATS K.M. STONES INC. NUMBERING & TAR SKIRTING:	NO.	730.75	690.00	40.75
RF1-003	PAINTING WHITE BACK GROUND ON PARAPETS ETC. & STENCILLING NOS.:	NO.	266.40	241.50	24.90
RF1-004	FIXING GUARD STONES IN ANY SOIL:	NO.	211.40	206.25	5.15
RF1-005	CASTING STD. K.M. STONES WITH R.C.C [1:2:4(19 MM) & CEMENT 282.5 KG/CU.M], FOR "A" AND "B" CLASS ROADS :	NO.	6,175.00	3,705.78	2,469.22
RF1-006	CASTING STD. K.M. STONES WITH R.C.C [1:2:4(19 MM) & CEMENT 282.5 KG/CU.M], FOR "C" AND "D" CLASS ROADS :	NO.	4,058.50	2,506.15	1,552.35
RF1-007	FIXING STANDARD TYPE K.M. STONES IN ANY SOIL:	NO.	1,575.10	1,531.25	43.85
RF1-008	FIXING NEW OR REFIXING GUARD STONES IN 225 MM THICK CEMENT CONCRETE [1:3:6(37.5 MM) AND CEMENT 219 KG/CU.M] WITH MINIMUM COVER 75 MM X 300 MM DEPTH :	NO.	902.70	411.25	491.45
RF1-009	CASTING STANDARD TYPE GUARD STONES IN CONCRETE [1:2:4(19 MM) & CEMENT 282.5 KG/CU.M] :	NO.	2,162.25	1,265.84	896.41
RF1-009A	CASTING STANDARD TYPE GUARD STONES IN IN CONCRETE GRADE 20(19) AS PER DRAWING NO. T/B/100-REV.1 FOR BRIDGES & CULVERTS	NO.	2,866.15	1,214.74	1,651.41
	* NOTE : 19 MM AGGREGATE PER GUARD STONE IS 0.058 CU.M.				
RF1-010	ROUTE NUMBERING WITH REFLECTIVE PAINT ON 2 SIDES:	NO.	663.10	625.00	38.10
RF1-011	CASTING STANDARD BOUNDARY MARKERS IN R/F CONCRETE[1:2:4(19MM) WITH ADMIXTURES, INCLUDING 14 DAYS CURING AND LOADING TO VEHICLES AT YARD. (AGGR. TRANSPORT TO PAY SEPARATELY) * :	NO.	2,108.90	962.28	1,146.62
	* NOTE : 19 MM AGGREGATE PER BOUNDARY MARKER IS 0.039 CU.M.				

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HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION XII =====					
NOTICE BOARDS & SIGN BOARDS -----					
[SSCM 810.2 AND 1501.3] (ALL PAINTS SHOULD CONFORM TO THE REQUIREMENTS OF S.L.S. AS GIVEN IN SSCM 1707)					
RS1-001	NOTICE & TRAFFIC SIGN BOARDS ETC. FIXED IN CONCRETE [1:3:6(37.5 MM) AND CEMENT 219 KG/CU.M], (EXCLUDING TRANSPORT OF AGGREGATE):	NO.	1,653.25	954.72	698.53
RS1-002	CLEANING & WHITEWASHING 2 COAT TOWN NAME BOARDS (INC. TAR SKIRT)	NO.	387.15	301.88	85.28
RS1-003	CLEANING, PAINTING ONE COAT & RELETTERING ETC. TRFFIC SIGN BOARDS INC. PAINT POST IN B/W	NO.	2,224.05	2,075.00	149.05
RS1-004	CLEANING AND PAINTING 1 COAT ON NOTICE BOARD	NO.	300.55	242.20	58.35
RS1-005	LETTERING & NUMBERING BELOW 50 MM	NO.	55.75	52.08	3.67
RS1-006	LETTERING & NUMBERING 50 MM - 75 MM	NO.	66.85	62.50	4.35
RS1-007	LETTERING & NUMBERING 75 MM - 150 MM	NO.	83.60	78.13	5.48
RS1-008	LETTERING & NUMBERING 150 MM - 225 MM	NO.	111.45	104.17	7.28
RS1-009	PAINTING 2 COATS CONTINUOUS CENTRE LINE, 100 MM WIDE WITH ENAMEL PAINT	METRE	134.65	103.75	30.90
RS1-010	PAINTING 1 COAT CONTINUOUS CENTRE LINE, 100 MM WIDE WITH ROAD MARKING PAINT(WHITE) :	METRE	140.45	109.51	30.94
RS1-011	PAINTING 2 COATS BROKEN CENTRE LINE, 100 MM WIDE WITH ENAMEL PAINT	METRE	129.60	103.75	25.85
RS1-012	PAINTING 1 COAT BROKEN CENTRE LINE, 100 MM WIDE WITH ROAD MARKING PAINT(WHITE) :	METRE	135.25	109.51	25.74
RS1-013	BARRICADING WITH EMPTY (HOT TAR) BARRELS INCLUDING WHITE WASHING, TRANSPORTING AND COST OF BARRELS :	NO.	248.55	158.92	89.63
RS1-014	REVTMENT TO BANKS ETC. WITH EMPTY BARRELS IN HORIZONTAL TIERS WITH VERTICAL BATTER(1:8), INCLUDING TRANSPORT OF BARRELS :	NO.	634.45	494.85	139.60

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
RS1-015	ROAD MARKING, CONTINUOUS CENTRE LINE 100 MM WIDTH, USING THERMOPLASTIC PAINT (WHITE) INCLUSIVE BARRICADING (PAINT MATERIAL AND REFLECTIVE GLASS BEADS TO PAY SEPARATELY):	SQ.M	290.85	141.00	149.85
NOTE *	1 KG OF THERMO PLASTIC PAINT COVERS 0.28 SQ.M AREA AT 1.5 MM THICKNESS 25 KG OF GLASS BEADS WILL COVER 100 SQ.M AREA				
RS1-016	ROAD MARKING, STANDARD PEDESTRIAN CROSSING, USING THERMOPLASTIC PAINT (YELLOW), INCLUSIVE BARRICADING (PAINT MATERIAL AND REFLECTIVE GLASS BEADS TO PAY SEPARATELY):	SQ.M	273.95	221.67	52.28
NOTE *	1 KG OF THERMO PLASTIC PAINT COVERS 0.28 SQ.M AREA AT 1.5 MM THICKNESS 25 KG OF GLASS BEADS WILL COVER 100 SQ.M AREA				

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HSR - 2019
Engineering Division
Ministry of Highways & Road Development
and Petroleum Resources Development

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
	SECTION XIII =====				
	MISCELLANEOUS -----				
MS1-001	PREPARING, STOCK PILING PREMIX USING 80/100 PEN. GRADE BITUMEN(EXCL. TRANSPORT OF AGGREGATE) (SITE MADE):	CU.M	17,519.80	4,452.30	13,067.50
MS1-002	PATCHING SHALLOW POT HOLES, DEPTH LESS THAN 20 MM USING 80/100 HOT BITUMEN 1.2 LTR/SQ.M AND 12.5 MM CHIPS SINGLE SIZE AT THE RATE OF 13.75 CU.DECI M/SQ.M INCLUDING HAND TAMPING (RATE INCLUDES COST OF BITUMEN AND MATERIALS) (EXCL. TRANSPORT OF AGGREGATE & BITUMEN):	SQ.M	265.10	75.81	189.29
MS1-003	PATCHING SHALLOW POT HOLES, DEPTH LESS THAN 20 MM USING MC30 1.2 LTR/SQ.M AND 12.5 MM CHIPS SINGLE SIZE AT THE RATE OF 13.75 CU.DECI M/SQ.M INCLUDING HAND TAMPING (RATE INCLUDES COST OF BITUMEN AND MATERIALS) (EXCL. TRANSPORT OF AGGREGATE AND BITUMEN):	SQ.M	279.75	84.89	194.86
MS1-004	PATCHING SHALLOW POT HOLES, DEPTH LESS THAN 20 MM USING EMULSION (CRS 1) AT THE RATE OF 1.2 LTR/SQ.M AND 12.5 MM CHIPS SINGLE SIZE AT THE RATE OF 13.75 CU.DECI M/SQ.M INCLUDING HAND TAMPING, TRANSPORT OF EMULSION TO SITE ETC. (RATE INCLUDES COST OF EMULSION AND OTHER MATERIALS)(EXCL. TRANSPORT OF AGGREGATE):	SQ.M	250.20	75.81	174.39
MS1-005	PATCHING POT HOLES OF MEDIUM DEPTH OF 20-75 MM WITH PREMIX MATERIAL (SITE MADE) USING CUT BACK 80/100 BITUMEN 10-20% AT THE RATE OF 83.5 LITRES PER CU. METRE OF 19 MM AND DOWN GAUGE STONE AGGREGATE, INCLUDING PREPARATION OF SURFACE, TACK COAT WITH EMULSION (CSS-1) AT .75 LTR/SQ.M, TRIMMING SIDES, LAYING PREMIX, TAMPING ETC. COMPLETE. (RATE INCLUSIVE OF PREMIX MADE AT SITE & TACK COAT) (EXCL. TRANSPORT OF AGGREGATE):	SQ.M	1,857.10	898.51	958.59
MS1-006	PATCHING POTHLES USING PLANT MADE BITUMEN BOUND BASE (WITH 60/70 BINDER) INCLUDING SEALING THE PATCHING WITH EMULSION(CRS-1) PAINTING @ 7.3 LTR/M.TON, COVER WITH SAND (SUPPLY AND TRANSPORT OF PREMIX TO BE PAID SEPARATELY) :	M.TON	4,783.40	3,450.00	1,333.40
MS1-007	PATCHING POT HOLES OF MEDIUM DEPTH OF 20-75 MM USING GRADED AGGREGATE 19 -12.5 MM USING HOT BITUMEN(80/100) @ 2 LTR/SQ.M COVERED WITH BLOTTON MATERIAL AT THE RATE OF 1 CU.M/125 SQ.M INCLUDING PREPARATION OF SURFACE, TACK COAT WITH (CSS-1) AT .75 LTR/SQ.M, TRIMMING SIDES, LAYING AGGREGATE, TAMPING ETC. COMPLETE. (RATE INCLUSIVE OF AGGREGATE & TACK COAT BUT EXCL. TRANSPORT OF AGGREGATE & BITUMEN):	SQ.M	1,231.15	603.62	627.53
MS1-008	PATCHING DEEP POT HOLES DEEPER THAN 75 MM WITH PREMIX MATERIAL (SITE MADE) TO A DEPTH OF 37.5 MM (OVER THE ALREADY PREPARED SURFACE WITH AGGREGATE AND GRAVEL PAID SEPARATELY) USING 10-20% CUT BACK BITUMEN AT THE RATE OF 83.5 LTR/CU.M OF 19 MM AND DOWN GRADED AGGREGATE INCL. PREPARATION OF SURFACE, TACK COAT WITH EMULSION (CSS-1) .75 LTR/SQ.M., TRIMMING SIDES, LAYING PREMIX, TAMPING ETC. COMPLETE (RATE INCLUSIVE OF PREMIX MADE AT SITE AND TACK COAT) (EXCL. TRANSPORT OF AGGREGATE & BITUMEN):	SQ.M	1,043.25	539.15	504.10

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
MS1-009	PATCHING POT HOLES MORE THAN 75 MM DEEP WITH WATER BOUND GRAVEL MATERIAL USING 50 MM OR 12.5 MM SINGLE SIZE AGGREGATE ALONG WITH USEABLE OLD AGGREGATE OBTAINED FROM PICKING AND PREPARATION OF SURFACE INCLUDING LAYING, WATERING, SPREADING GRAVEL OF APPROVED QUALITY AND TAMPING AS DIRECTED. (AGGREGATE AND GRAVEL WILL BE PAID SEPARATELY):	SQ.M	58.10	56.45	1.65
MS1-010	PATCHING RUTS AND DEPRESSIONS UPTO 75 MM DEPTH USING SITE MADE COLD MIX(CUT BACK) MATERIAL WITH THE SURFACE AND EDGE PREPARED AS PER SPECIFICATIONS AND APPLICATION OF TACK COAT WITH EMULSION (CSS-1) .75 LTR/SQ.M., (EXCL. TRANSPORT OF AGGREGATE):	SQ.M	1,690.20	735.67	954.53
MS1-011	PATCHING RUTS AND DEPRESSIONS UPTO 75 MM DEPTH USING PLANT MADE COLD MIX(60/70 CUT BACK) MATERIAL WITH THE SURFACE AND EDGE PREPARED AS PER SPECIFICATIONS AND APPLICATION OF TACK COAT WITH EMULSION (CSS-1) @ .75 LTR/SQ.M (SUPPLY AND TRANSPORT OF PREMIX TO BE PAID SEPARATELY):	SQ.M	463.15	395.02	68.13
MS1-012	PATCHING RUTS AND DEPRESSIONS DEEPER THAN 75 MM THE SURFACE AND EDGES PREPARED AS PER SPECIFICATION TACK COAT WITH EMULSION(CSS-1) @ .75 LTR/SQ.M, TRIMMING SIDES, 50 MM DOWN GAUGE AGGREGATED LAID AND COMPACTED AND THE TOP 40 MM LAID AND COMPACTED WITH SITE MADE COLD MIX(CUT BACK) MATERIAL (AGGREGATE 50 MM DOWN GAUGE AND TRANSPORT WILL BE PAID SEPARATELY) :	SQ.M	1,368.40	852.84	515.56
MS1-013	PATCHING RUTS AND DEPRESSIONS UPTO 75 MM DEPTH THE SURFACE AND EDGES PREPARED AS PER SPECIFICATION AND APPLICATION OF TACK COAT WITH EMULSION(CSS-1) AT .75 LTR/SQ.M 50 MM DOWN GAUGE AGGREGATED LAID AND COMPACTED, USING HOT BITUMEN(80/100) @ 2 LTR/SQ.M COVERED WITH BLOTTON MATERIAL (SAND) AT THE RATE OF 1 CU.M/125 SQ.M (AGGREGATE WILL BE PAID SEPARATELY):	SQ.M	994.80	696.48	298.32
MS1-014	PATCHING RUTS AND DEPRESSIONS DEEPER THAN 75 MM DEPTH THE SURFACE AND EDGES PREPARED AS PER SPECIFICATION AND APPLICATION OF TACK COAT WITH EMULSION(CSS-1) @ .75 LTR/SQ.M 50 MM DOWN GAUGE AGGREGATED LAID AND COMPACTED, USING HOT BITUMEN(80/100) @ 2 LT/SQ.M COVERED WITH BLOTTON MATERIAL (SAND) AT THE RATE OF 1 CU.M/125 SQ.M (AGGREGATE WILL BE PAID SEPARATELY):	SQ.M	1,125.45	822.41	303.04
MS1-015	CORRECTING & STRENGTHENING THE EDGES OF ROAD WITH SITE MADE COLD MIX 40MM THICK PREPARED USING CUT BACK BITUMEN 10-20% AT THE RATE OF 83.5 LTR/CU.M OF 19 MM AND DOWN GAUGE AGGREGATE OVER A TACK COAT USING WITH EMULSION AT .75 LTR/SQ.M LAID OVER 50 MM AND DOWN GAUGE AGGREGATE LAID, ON POSITION WATERED AND COMPACTED INCLUDING EARTH WORK EXCAVATION TO A WIDTH OF 225 MM AND DEPTH OF 125 MM. (COST OF AGGREGATE AND TRANSPORT TO BE PAID SEPARATELY) :	SQ.M	1,655.05	1,125.50	529.55

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
MS1-016	CORRECTING & STRENGTHENING THE EDGES OF ROAD WITH SITE MADE COLD MIX 40 MM THICK PREPARED USING CUTBACK BITUMEN 10-20% AT THE RATE OF 83.5 LTR/CU.M OF 19 AND DOWN GAUGE AGGREGATE OVER A TACK COAT WITH EMULSION AT .75 LTR/SQ.M LAID OVER 50 MM AND DOWN GAUGE AGGREGATE LAID, ON POSITION WATERED AND COMPACTED WITH A BOTTOM LAYER OF 100 MM AGGREGATE CLOSELY PACT, INCLUDING EARTH WORK EXCAVATION TO A WIDTH OF 225 MM AND DEPTH OF 225 MM (AGGREGATE 100 MM, 50 MM DOWN GAUGE AND TRANSPORT WILL BE PAID SEPARATELY):	SQ.M	1,915.50	1,371.97	543.53
MS1-017	PATCH SEALING WITH EMULSION PAINTING THE SURFACE BY SPRAY OF CRS-1 AT THE RATE OF .75 LTR/SQ.M SQUEEGING THE EMULSION AND SPREADING THE BLOTTON MATERIAL (SAND) AT THE RATE OF 1 CU.M/125 SQ.M :	SQ.M	137.60	28.76	108.84
MS1-018	PATCH SEALING WITH HOT BITUMEN PAINTING THE SURFACE BY USING .75 LTR/SQ.M SQUEEGING THE BITUMEN AND SPREADING THE BLOTTON MATERIAL (SAND) AT THE RATE OF 1 CU.M/125 SQ.M (TRANSPORT OF BITUMEN PAID SEPARATELY):	SQ.M	147.05	28.76	118.29
MS1-019	PATCH SEALING OF PITTED SURFACE USING HOT SAND BITUMEN MIX 104 LTR/CU.M OF SAND SPREAD AND HAND TAMPED INCLUDING BRUSHING AND CLEANING THE SURFACE BEFORE APPLICATION (EXCLUDING TRANSPORT OF BITUMEN):	SQ.M	338.45	112.01	226.44
MS1-020	PATCH SEALING OF PITTED SURFACES WITH A EMULSION SAND SLURRY USING CRS 1 OR 2 AT THE RATE OF 136.5 LTR/CU.M OF SAND MIX PROPERLY LAID, LEVELLED & SQUEEGED INCLUDING BRUSHING AND CLEANING THE SURFACE BEFORE APPLICATION:	SQ.M	343.85	81.71	262.14
MS1-021	GENERAL UPKEEP OF ROAD SIDES INCLUDING MAINTAINING THE RIGHT OF WAY IN A NEAT CONDITION BY TRIMMING, WEEDING & CLEARING OF THE ROAD SIDES, DRAINS, DRAINAGE STRUCTURES, SCUPPER DRAINS AND CLEANING MINOR SLIPS:	SQ.M	28.95	27.87	1.08
MS1-022	CLEANING ORDINARY JUNGLE INCLUDING REMOVING HIGH GROWING PLANTS AND TREES OF GIRTH LESS THAN 300 MM OTHER THAN THOSE DESIGNATED TO REMAIN, BY UPROOTING OR BY CUTTING AND THEN UPROOTING THE STUMPS OR BY CUTTING ONLY AS DIRECTED.(SSCM 1203.2):	SQ.M	3.55	3.46	0.09
MS1-023	CLEARING MEDIUM JUNGLE INCLUDING REMOVING ALL HIGH GROWING PLANTS AND TREES OF GIRTH LESS THAN 300 MM OTHER THAN THOSE DESIGNATED TO REMAIN, BY UPROOTING OR BY CUTTING AND THEN UPROOTING THE STUMPS OR BY CUTTING ONLY AS DIRECTED:	SQ.M	4.90	4.80	0.10
MS1-024	CLEARING HEAVY JUNGLE INCLUDING REMOVING ALL HIGH GROWING PLANTS AND TREES OF GIRTH LESS THAN 300 MM OTHER THAN THOSE DESIGNATED TO REMAIN, BY UPROOTING OR BY CUTTING AND THEN UPROOTING THE STUMPS OR BY CUTTING ONLY AS DIRECTED:	SQ.M	6.30	6.15	0.15
MS1-025	REPAIRS TO DAMAGE OF SHOULDERS VERGES AND EMBANKMENTS SLOPES INCLUDING MAKING GOOD DEPRESSIONS, RUTS, HOLES AND ERROSION PATH WITH APPROVED GRAVELLY SOIL AND COMPACTING THE SAME WITH ROLLER (8-10 TON) AS DIRECTED (GRAVELLY SOIL TO BE PAID SEPARATELY IF BROUGHT FROM OUTSIDE) [SSCM 1201.3]:	CU.M	531.10	291.52	239.58

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
MS1-026	REGRAIDING AND REGRAVELLING OF SHOULDERS WITH GRAVEL OF APPROVED QUALITY, DULY COMPACTED WITH ROLLER(8-10TONS) AS DIRECTED FOR REPAIRING HIGH SIDES CAUSED BY HEAVINGS DEPOSITS AND CONSTRUCTION DEBRIS, TO REQUIRED LEVELS BY USING A GRADER(120-140 HP) (GRAVEL TO BE PAID SEPARATELY)[SSCM 1201.3(b)]:	CU.M	313.95	0.00	313.95
MS1-027	REGRAIDING AND REGRAVELLING OF SHOULDERS WITH GRAVEL OF APPROVED QUALITY, DULY COMPACTED WITH ROLLER(8-10TONS) AS DIRECTED FOR REPAIRING HIGH SIDES CAUSED BY HEAVINGS DEPOSITS AND CONSTRUCTION DEBRIS, TO REQUIRED LEVELS MANUALLY (GRAVEL(LOOSE VOLUME) TO BE PAID SEPARATELY) [SSCM 1201.3(b)]:	CU.M	592.40	333.33	259.07
MS1-028	REPLACING THE DAMAGE CRACKED CONCRETE SLABS IN THE FOOT WALKS WITH PRECAST/CAST INSITU CEMENT CONCRETE 1:2:4(19MM) USING 19 MM & DOWN GAUGE STONE AGGREGATE TO A MINIMUM THICKNESS OF 50 MM INCLUDING FIXING/LAYING IN POSITION WITH CEMENT MOTAR 1:3 JOINTS OVER A COMPACTED BED ETC. EXCLUDING TRANSPORT OF AGGREGATE. [SSCM 1204.3] :	SQ.M	2,310.65	1,520.17	790.48
MS1-029	CUTTING AND REMOVING FALLEN TREES UPTO 600 MM GIRTH INCLUDING CUTTING INTO REQUIRED NUMBER OF PIECES INCLUDING DISPOSAL AS DIRECTED. MINIMUM PIECES SHALL NOT BE LESS THAN 2.5 M LENGTH [SSCM 1203.2]	NO.	739.90	721.88	18.03
MS1-030	CUTTING AND REMOVING FALLEN TREES 600-900 MM GIRTH INCLUDING CUTTING INTO REQUIRED NUMBER OF PIECES INCLUDING DISPOSAL AS DIRECTED. MINIMUM PIECES SHALL NOT BE LESS THAN 2 M LENGTH [SSCM 1203.2]	NO.	1,057.05	1,031.25	25.80
MS1-031	WEEDING MASONRY CULVERTS SMALL BRIDGES AND RETAINING WALLS [SSCM 1303.3]:	NO.	188.90	180.00	8.90
MS1-032	MASONRY RANDOM RUBBLE WITH BOULDERS INCLUDING COLLECT[SSCM 1006.3(b)]:	CU.M	1,466.35	1,400.00	66.35
MS1-033	FIXING CATS EYES IN TAR MACADAM INCLUDING BREAKING ROAD SURFACE, BARRICADE ETC. [SSCM 810.3(C)]:	NO.	402.20	357.50	44.70
MS1-034	REDUCING HIGH SIDES IN ORDINARY SOIL [SSCM 301.3/1201.3 (c)]:	CU.M	644.70	583.04	61.66
MS1-035	REDUCING HIGH SIDES IN MEDIUM SOIL:	CU.M	943.50	874.56	68.94
MS1-036	REDUCING HIGH SIDES IN HARD SOIL:	CU.M	1,242.30	1,166.08	76.22
MS1-037	REDUCING HIGH SIDES IN SOFT ROCK:	CU.M	1,541.10	1,457.60	83.50
MS1-038	REDUCING HIGH SIDES IN ROCK REQUIRING BLASTING :	CU.M	2,979.75	1,943.46	1,036.29
MS1-039	WHITE WASHING 1 COAT TO PARAPETS OF BRIDGES AND CULVERTS.[SSCM 1403.3(e)]:	SQ.M	44.45	37.10	7.35

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
MS1-040	WHITE WASHING 2 COATS TO PARAPETS OF BRIDGES AND CULVERTS:	SQ.M	76.30	64.92	11.38
MS1-041	WHITE WASHING 1 COAT TO PARAPETS OF BRIDGES AND CULVERTS AFTER CLEANING ATTENDING TO MINOR REPAIRS:	SQ.M	59.85	41.40	18.45
MS1-042	WHITE WASHING 2 COATS TO PARAPETS OF BRIDGES AND CULVERTS AFTER CLEANING ATTENDING TO MINOR REPAIRS:	SQ.M	95.00	72.45	22.55
MS1-043	PAINTING WITH EMULSION 1 COAT TO PARAPETS OF BRIDGES AND CULVERTS, GUARD STONES AND K.M. POSTS AFTER CLEANING AND ATTENDING TO MINOR REPAIRS.[SSCM 1501.3(a)-(v)]:	SQ.M	176.40	104.20	72.20
MS1-044	PAINTING WITH ENAMEL 1 COAT TO PARAPETS OF BRIDGES AND CULVERTS, GUARD STONES AND K.M. POSTS AFTER CLEANING AND ATTENDING TO MINOR REPAIRS.[SSCM 1501.3(a)-(v)]:	SQ.M	184.30	104.20	80.10
MS1-045	PAINTING WITH ENAMEL 2 COATS TO PARAPETS OF BRIDGES AND CULVERTS, GUARD STONES AND K.M. POSTS AFTER CLEANING AND ATTENDING TO MINOR REPAIRS.[SSCM 1501.3(a)-(v)]:	SQ.M	313.75	194.19	119.56
MS1-046	PAINTING WITH EMULSION 2 COATS TO PARAPETS OF BRIDGES AND CULVERTS, GUARD STONES AND K.M. POSTS AFTER CLEANING AND ATTENDING TO MINOR REPAIRS:	SQ.M	307.00	194.19	112.81
MS1-047	PAINTING 1 COAT EMULSION PAINT TO PARAPETS OF BRIDGES AND CULVERTS, GUARD STONES AND K.M. POSTS INCLUDING PREPARING SURFACE OF OLD WORK.[SSCM 1501.3(b)(v)]:	SQ.M	165.45	104.20	61.25
MS1-048	PAINTING SUB COAT EMULSION PAINT TO PARAPETS OF BRIDGES AND CULVERTS, GUARD STONES AND K.M. POSTS INCLUDING PREPARING SURFACE SSCM 1501.3(b):	SQ.M	144.95	89.99	54.96
MS1-049	PAINTING 1 COAT EMULSION PAINT TO PARAPETS OF BRIDGES AND CULVERTS, GUARD STONES AND K.M. POSTS INCLUDING PREPARING SURFACE OF NEW WORK.[S.S.C.M. 1501.3 (b)(v)]:	SQ.M	150.85	89.99	60.86
MS1-050	CLEANING & PAINTING 100 MM WIDE STRIPE FOR SKIRTING TO GUARD STONES. [SSCM 1501.3(b)(v)]:	METRE	87.60	84.84	2.76
MS1-051	PAINTING 2 COATS STANDARD PEDESTRIAN CROSSING FOR CARRIAGEWAY. [SSCM 810.2(c)]:	METRE	1,888.85	1,559.08	329.77
MS1-052	PAINTING 1 COAT STANDARD PEDESTRIAN CROSSING FOR CARRIAGEWAY USING ROAD MARKING PAINTS. [SSCM 810.2(c)]:	METRE	2,068.25	1,700.82	367.43
MS1-053	ERECTING, BARRICADING IN JUNGLE TIMBER 75 - 100 MM DIA. VERTICAL POSTS AT .9 M CENTRES AND 1.2 M ABOVE GROUND INCLUDING WHITE WASHING.[SSCM 1709]:	METRE	329.00	225.41	103.59
MS1-054	TEMPORARY SCAFFOLDING FOR PAINTING OR TARRING BRIDGES AND FOR WEEDING ON BRIDGES OR RETAINING WALL INCLUDING DISMANTLING AFTER WORK.[SSCM 1008.3(a)]:	SQ..M	131.45	116.13	15.32

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CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
MS1-055	ROUGHNING EXISTING SMOOTH TARRED METALLED CARRIAGEWAY BY HAND FOR BONDING, COLLECTING DISPOSAL OF ALL LOOSE MATERIALS.[SSCM 403.3(b)]:	SQ.M	19.85	19.35	0.50
MS1-056	SUPPLY OF DIESEL FOR MACHINERIES: (EX-FILLING STATION):	LITRE	101.00	0.00	101.00
MS1-057	PATCHING ROAD WITH PREMIX (LOOSE VOLUME) AFTER PREP. SURFACE WITH EMULSION(CSS-1) AT .75 LTR/SQ.M AS TACK COAT, INCLUDING INTERNAL TRANSPORT AND HAND TAMPING. (SUPPLY OF PREMIX(LOOSE VOL.) PAID SEPARATELY) [SSCM 1102.3(b)(i)]:	CU.M	6,111.25	4,266.78	1,844.47
MS1-058	PATCHING ROAD WITH PREMIX AFTER PREPARING SURFACE WITH EMULSION(CSS-1) AT .75 LTR/SQ.M AS TACK COAT, INCLUDING INTERNAL TRANSPORT AND STAMPING WITH MACHINE.(SUPPLY OF PREMIX PAID SEPARATELY) [SSCM 1102.3(b)(i)]:	M.TON	6,196.60	4,035.71	2,160.89
MS1-059	PAINTING TWO COATS ENAMAL PAINT ON KERBS, AFTER CLEANING AND PREPARING SURFACE.	SQ.M	352.10	256.35	95.75
MS1-060	PREPARING AND STOCK PILING PREMIX AT SITE USING 12.5 MM AGGREGATE AND EMULSION CSS-1. (EXCLUDING TRANSPORT OF AGGREGATE) :	CU.M	15,145.25	2,968.20	12,177.05
MS1-061	BREAKING MANUALLY ASPHALT LAYER 2"-3" THICK ON THE CARRIAGEWAY FOR KERB LAYING	L.M	487.95	476.04	11.91

* * *

HIGHWAY SCHEDULE OF RATES - SUMMARY 2019
CENTRAL PROVINCE

CODE ----	DESCRIPTION OF ITEM -----	UNIT ----	AMOUNT RS. -----	LABOUR INPUT ----	OTHER INPUTS ----
SECTION XIV =====					
SURVEYING, LEVELLING AND DAYWORKS -----					
SV1-001	SUPPLY OF UNSKILLED LABOUR:	DAY	1,650.00	1,650.00	0.00
SV1-002	SUPPLY OF SEMISKILLED LABOUR:	DAY	1,800.00	1,800.00	0.00
SV1-003	SUPPLY OF SKILLED 'A' GRADE LABOUR:	DAY	2,500.00	2,500.00	0.00
SV1-004	SUPPLY OF SKILLED 'B' GRADE LABOUR:	DAY	2,200.00	2,200.00	0.00
SV1-005	CLEARING JUNGLE (LIGHT) TO A WIDTH OF 1.22 METRES FOR SURVEY WORK:	K.M	6,302.80	6,149.07	153.73
SV1-006	CLEARING JUNGLE (MEDIUM) TO A WIDTH OF 1.22 METRES FOR SURVEY WORK:	K.M	8,403.75	8,198.76	204.99
SV1-007	CLEARING JUNGLE (HEAVY) TO A WIDTH OF 1.22 METRES FOR SURVEY WORK:	K.M	12,605.60	12,298.14	307.46
SV1-008	SUPPLY OF LABOUR FOR CHAINING AND CUTTING PEGS AND PEGGING:	K.M	1,718.95	1,677.02	41.93
SV1-009	LEVELLING CHAINING AND PEGGING AND ESTABLISHING BENCH MARKS ON CONCRETE ROCK OR PEGS AND CHECKING BACK LEVELS:	K.M	3,437.90	3,354.04	83.86
SV1-010	SURVEYING INCLUDING FIXING PICKETS & TAKING ANGLES:	K.M	3,437.90	3,354.04	83.86
SV1-011	CHANGING TRAVERSE LINES AND TAKING OFF-SETS:	K.M	4,583.85	4,472.05	111.80

* * *

**EX-PLANT BASIC PRICES OF ASPHALT CONCRETE MATERIALS PRODUCED AT MIXING PLANTS
LOCATED IN THE PROVINCES : HSR-2019**

- NOTE:**
1. TRANSPORT COST OF ALL RAW MATERIALS AND ROYALTY INCLUDED IN THE GIVEN PRICES.
 2. PRICES FROM THE ASPHALT CONCRETE MIXING PLANT CLOSEST TO THE WORK SITE, WHICH IS ABLE TO SUPPLY THE REQUIRED TYPE (HOT/COLD) SHALL BE CONSIDERED.
 3. ADD PREMIX TRANSPORT FROM MIXING PLANT TO THE WORK SITE, SEPARATELY
 4. BINDER % OF B0-361A, B0-362, B0-362A AND B0-365 ARE BY TOTAL MIX WEIGHT AND BINDER % OF B0-366 IS BY TOTAL WEIGHT OF AGGREGATE

PRICE : EX-PLANT COST RS. PER M.Ton																
PROVINCE			WESTERN		SOUTHERN		CENTRAL		NORTH CENTRAL		NORTH WESTERN		UVA		SABARAGAMUWA	
LOCATION																
CODE	AGG. SIZE	UNIT	% BINDER	PRICE	% BINDER	PRICE	% BINDER	PRICE	% BINDER	PRICE	% BINDER	PRICE	% BINDER	PRICE	% BINDER	PRICE
B0-361	19 mm	PER M.T.	-	NIL	-	NIL	-	NIL	-	NIL	-	NIL	-	NIL	-	NIL
B0-361A	19 mm	PER M.T.	4.70	8,790.00	4.70	8,185.00	4.70	8,812.00	4.60	8,416.00	4.70	8,407.00	4.70	8,668.00	4.70	8,217.00
B0-362	37.5 mm	PER M.T.	3.50	7,889.00	3.50	7,233.00	-	NIL	3.50	7,425.00	-	NIL	-	NIL	-	NIL
B0-362A	19 mm	PER M.T.	4.10	8,433.00	4.10	7,831.00	4.10	8,679.00	4.10	7,980.00	4.10	7,959.00	4.10	8,171.00	4.10	7,895.00
B0-365 *	19 mm	PER M.T.	5.50	9,854.00	5.50	9,308.00	-	NIL	5.50	9,526.00	-	NIL	-	NIL	-	NIL
B0-365A**	19 mm	PER M.T.	5.50	9,880.00	5.50	9,308.00	-	NIL	5.50	9,436.00	-	NIL	-	NIL	-	NIL
B0-366***	19 mm	PER M.T.	-	-	-	-	6.67	8,357.00	6.67	8,533.00	-	NIL	6.67	8,000.00	-	NIL

* Binder for B0-365 is 15% cut-back with Bitumen 60/70 penetration grade; 19mm Aggregate

** Binder for B0-365A is 16% cut-back with Bitumen 60/70 penetration grade; 12.5 Aggregate

*** Binder for B0-366 is Emulsion CSS-1

ROAD DEVELOPMENT AUTHORITY
SCHEDULE OF HIRE CHARGES FOR MACHINERY AND EQUIPMENT-2019
WITH EFFECT FROM 01ST JANUARY 2019

K=70.00 P=140.00 D=111.00
 Mechanical Division RDA 2019

2019/1

BASIC RATE **No Profit & Overhead**

1 **M/CYCLES,CARS, JEEPS & DOUBLE CABS, PASSENGER VAN, BUS**

HSR CODE	DESCRIPTION	PLANT CAPACITY	HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
			DRY	WET	DRY	WET	DRY	WET	DRY	WET
	Car	2000 & above Diesel	28.19	48.55	21.51		23.31	37.22		
	Car	Below 2000, Diesel	22.29	34.21	15.62		18.73	30.65		
	Car	1500 & above Petrol mfd before 2006	20.02	38.58	13.34		17.02	35.58		
	Car	1500 & above Petrol mfd after 2006	46.68	65.25	40.01		36.37	54.93		
	Car	1500 & above Petrol mfd after 2014	53.52	72.08	46.85		41.33	59.90		
	Car	Below 1500 Petrol	16.84	31.69	10.17		14.59	29.44		
	Car STDP	1500cc Subaru	62.73	81.29	56.05		48.02	66.58		
	Jeep	Mitsubishi J44,J36	19.09	34.99	12.41		17.59	33.49		
	Jeep	Pajero, Troupier	24.03	42.20	17.35		21.78	39.95		
	Jeep	Pajero 4M40 65 Sri	62.06	80.23	55.39		53.44	71.61		
	Jeep	Land Cruiser	127.76	153.20	121.08		108.37	133.81		
	Jeep	Land Cruiser mfd 2010	273.63	299.07	266.96		229.80	255.24		
	Jeep STDP	Nissan X Trail mfd 2011	297.57	323.01	290.90		244.69	270.13		
	Jeep STDP	Nissan Petrol mfd 2011	307.33	332.77	300.66		301.51	326.95		
B0-149	Pickup Truck	Single Cab 2WD	13.67	27.24	6.55		13.07	26.64		
	Pickup Truck	Double Cab, 4WD	16.36	31.44	9.24		15.36	30.44		
	Pickup Truck	Double Cab, 2WD	15.21	27.54	8.09		14.31	26.64		
	Pickup Truck	Double Cab, 4WD above 250-	24.41	37.98	17.29		22.01	35.58		
	Pickup Truck	Double Cab, 2WD above 250-	21.66	33.46	14.54		19.66	31.46		
	Pickup Truck	Double Cab, 4WD mfd 2011	76.56	88.36	69.44		65.36	77.16		
	Pickup Truck	Double Cab, 4WD mfd after 2014	93.26	105.06	86.15		79.26	91.06		
	Motor Cycle	125 CC	1.23	4.57	1.23		1.02	4.36		
	Motor Cycle STDP	892 CC	48.09	51.43	48.09		35.19	38.53		
	Passenger Van	6 to 9 seater	22.14	36.72	15.47		20.08	34.65		
	Passenger Van	above 10 seat	71.98	89.87	65.31		61.04	78.93		
	Bus	30 seater A/C	74.27	93.55			63.27	82.55		

ANNEX-1

ROAD DEVELOPMENT AUTHORITY
SCHEDULE OF HIRE CHARGES FOR MACHINERY AND EQUIPMENT-2019
WITH EFFECT FROM 01ST JANUARY 2019

K=70.00 P=140.00 D=111.00
 Mechanical Division RDA 2019 2019/1

BASIC RATE
2

No Profit & Overhead
TRUCKS AND BOWSERS

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
	Tipper Truck	10 Ton	69.15	106.46	1,728.63	2,661.43	61.45	98.76	1,536.13	2,468.93
	Tipper Truck	7 Ton, Old TATA	40.58	69.94	1,055.13	1,818.33	37.08	66.44	964.13	1,727.33
	Tipper Truck	7 Ton, Isuzu	58.56	87.91	1,522.48	2,285.68	52.10	81.45	1,354.48	2,117.68
	Tipper Truck	5 Ton	40.25	63.87	1,126.88	1,788.32	39.17	64.61	1,018.38	1,679.82
	Tipper Truck	3 ton	33.89	53.46	1,016.72	1,603.80	30.74	50.31	922.22	1,509.30
	Lorry	17 Ton	103.21	147.99	2,580.33	3,699.69	88.81	133.59	2,220.33	3,339.69
B0-151	Lorry	17 Ton- Self Loading/ wi10 t Crane	129.51	174.28	3,237.76	4,357.12	112.07	156.84	2,801.76	3,921.12
	Lorry	12 Ton	70.25	107.56	1,756.13	2,688.93	61.45	98.76	1,536.13	2,468.93
	Lorry	10 T /5T crane Self load	172.49	213.19	4,312.20	5,329.80	146.89	187.59	3,672.20	4,689.80
	Lorry	10 Ton with 5 Ton Crane	123.78	164.49	3,094.58	4,112.18	107.14	147.85	2,678.58	3,696.18
B0-148	Lorry	10 Ton	62.38	99.60	1,559.62	2,490.00	55.02	92.24	1,375.62	2,306.00
	Lorry	7 Ton with 3 Ton Crane	66.51	93.77	1,862.37	2,625.57	58.51	85.77	1,638.37	2,401.57
B0-127	Lorry	7 Ton	36.17	63.42	1,012.65	1,775.85	33.17	60.42	928.65	1,691.85
B0-126	Lorry	5 Ton	32.09	54.70	962.68	1,641.08	29.41	52.02	882.18	1,560.58
B0-125	Lorry	3 Ton	27.62	43.52	883.99	1,392.79	25.22	41.12	806.99	1,315.79
	Cargo Truck Chinese	10T Truck with 5T crane	295.33	336.03	7,383.16	8,400.76	254.77	295.47	6,369.16	7,386.76
	Crew Cabs	2771 cc mfd after 2007	57.30	73.20	1,833.56	2,342.36	50.00	65.90	1,600.11	2,108.91
	Dump Truck	30 T, Quarry	427.13	511.93	8,542.69	10,238.69	361.88	446.68	7,237.69	8,933.69
	Wrecker Truck	5 ton	45.51	85.26	1,137.66	2,131.41	41.93	81.68	1,048.26	2,042.01
	Complex	Portable Office/gen set	3.96	6.87	79.20	137.50	2.25	5.16	45.00	103.30
	Truck	Mobile Workshop	73.70	117.56	2,137.22	3,409.22	67.08	110.94	1,945.20	3,217.20
	Truck	Lube Service 4X4	57.67	98.79	1,672.50	2,865.00	51.38	92.50	1,489.94	2,682.44
	Truck	Explosive Transporter	41.72	78.06	1,251.56	2,341.84	34.68	71.02	1,040.44	2,130.72
	Truck	Snooper 750 Kg	68.74	96.73	1,718.61	2,418.21	58.84	86.83	1,471.11	2,170.71
	Diesel Bowser	9000-10,000 Lit Capacity	89.49	125.84	2,684.82	3,775.10	79.46	115.80	2,383.82	3,474.10
	Diesel Bowser	6000 Litre Capacity	58.21	90.01	1,746.44	2,700.44	53.08	84.88	1,592.44	2,546.44
	Diesel Bowser Chinese	6000 Litre Capacity	228.96	260.76	6,868.76	7,822.76	199.76	231.56	5,992.76	6,946.76
	Bowser only	Water / Fuel	1.43	1.43	28.54	28.54	0.92	0.92	18.46	18.46
	Bowser only	Emulsion	2.01	2.01	36.24	36.24	1.19	1.19	21.45	21.45
B0-130	Bowser	With out Primemover	15.59	15.59	311.85	311.85	12.82	12.82	256.41	256.41
	Bowser	With old Primemover	130.97	186.38	2,106.20	3,325.20	120.87	176.27	1,889.50	3,108.50
B0-141	Bowser	Bitumen - 10,000 ltr	99.64	160.21	2,789.78	4,485.78	87.69	148.26	2,455.22	4,151.22
	Bitumen Bowser CHIN	Bitumen - 10,000 Ltr	332.96	350.25	8,216.88	9,806.88	239.46	296.25	6,704.88	8,294.88
B0-153	Bowser	Emulsion - 8,000 ltr	84.49	135.66	2,450.08	3,934.08	73.65	124.82	2,135.92	3,619.92
	Water Bowser	9000-10,000 Lit Capacity	86.66	123.00	2,599.85	3,690.13	77.09	113.44	2,312.85	3,403.13
B0-128	Water Bowser	6000 Litre Capacity	52.59	84.39	1,683.01	2,700.61	48.22	80.02	1,543.01	2,560.61

ANNEX-1

ROAD DEVELOPMENT AUTHORITY
SCHEDULE OF HIRE CHARGES FOR MACHINERY AND EQUIPMENT-2019
WITH EFFECT FROM 01ST JANUARY 2019

BASIC RATE
3

No Profit & Overhead
LORRIES, TIPPERS, DUMP TRUCKS
When Used for Transport of Materials
Hire Charge Loaded Inclusive of Return trip

K=70.00 P=140.00 D=111.00
 Mechanical Division RDA 2019

2019/1

Use This Table Only for The Transport of Materials

HSR CODE	PLANT		HIRE Per KM (inclusive return) Rs.		Hire / KM / Cu. M inclusive return Rs		HIRE Per KM (inclusive return) Without Repl. Cost. Rs		HIRE/KM/Cu.M (inclusive return) Without Repl. Cost. Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
			Tipper Truck	10 Ton	120.56	185.85	16.07	24.78	107.08	172.38
	Tipper Truck	7 Ton, Old TATA	70.59	121.96	15.69	27.10	64.46	115.83	14.32	25.74
	Tipper Truck	7 Ton, Isuzu	102.04	153.41	22.68	34.09	94.37	147.79	20.97	32.84
	Tipper Truck	5 Ton	70.03	111.37	20.01	31.82	63.25	104.59	18.07	29.88
	Tipper Truck	3 Ton	58.94	93.18	23.57	37.27	53.42	87.67	21.37	35.07
	Lorry	17 Ton	196.83	275.18	15.75	22.01	171.63	249.98	13.73	20.00
	Lorry	12 Ton	122.48	187.78	13.61	20.86	107.08	172.38	11.90	19.15
	Lorry	10 Ton	107.35	168.40	14.31	22.45	94.47	155.52	12.60	20.74
	Lorry	7 Ton	62.89	110.59	13.98	24.58	57.64	105.34	12.81	23.41
	Lorry	5 Ton	55.78	95.36	15.94	27.24	51.09	90.66	14.60	25.90
	Lorry	3 Ton	47.99	75.82	19.20	30.33	43.78	71.61	17.51	28.64
	Dump Truck	30 T, Quarry	774.81	923.21	48.43	57.70	660.63	809.03	41.29	50.56

4

COMPACTION EQUIPMENT

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY			DRY	WET	DRY	WET	DRY	WET
	Smooth Roller	3 Ton Static			526.03	791.03			503.53	768.53
	Smooth Roller Chinese	3 - 5Ton Vibrating			3,124.50	3,389.50			2,754.50	3,019.50
B0-111	Smooth Roller	8-10 Ton Static			1,002.31	1,532.31			929.89	1,459.89
	Smooth Roller Chinese	8-10 Ton Static Double Drum			2,356.65	2,907.85			2,060.85	2,612.05
B0-109	Vib Roller	600-900 Kg Pedestal			687.32	862.86			562.82	738.36
	Vib Roller Chinese	800 Kg			828.04	1,029.44			671.79	873.19
	Vib Roller	2.5-4 Ton Tandem			943.22	1,281.57			816.36	1,154.72
	Vib Roller Chinese	3 Ton Tandem			2,898.64	3,269.64			2,366.40	2,737.40
B0-135	Vib Roller	6-7 ton Tandem			1,657.45	2,611.45			1,426.81	2,380.81
	Vib Roller	6 Ton With Edgecutter			2,292.80	3,259.52			1,918.01	2,884.73
B0-110	Vib Roller	10 Ton Smooth			2,707.50	4,233.90			2,349.30	3,875.70
	Vib Roller Chinese	10 Ton Twin Drum Smooth			9,774.37	11,364.37			8,228.22	9,818.22
	Vib Roller	10 Ton Pad Foot			2,750.67	4,277.07			2,413.22	3,939.62
B0-112	Pneu Roller	8-10 Ton, Pnematic trd			2,883.65	4,181.09			2,571.80	3,869.24
	Pneu. Roller Chinese	8-10 Ton, Pnematic trd			6,840.28	8,430.28			6,234.28	7,824.28
	Pad Foot	Sheep Foot Rollers			141.64	141.64			99.14	99.14
B0-108	Rammers	60 Kg			275.79	491.11			242.13	457.45
B0-107	Plate comp	90 Kg Tamper Plates			309.83	513.35			282.02	485.54
B0-106 Ave	Porker Petrol	With Vibrators			168.68	231.05			144.98	207.35
B0-106 Ave	Porker Diesel	With Vibrators			201.40	309.52			178.61	286.73

ANNEX-1

ROAD DEVELOPMENT AUTHORITY
SCHEDULE OF HIRE CHARGES FOR MACHINERY AND EQUIPMENT-2019
WITH EFFECT FROM 01ST JANUARY 2019

K=70.00 P=140.00 D=111.00
 Mechanical Division RDA 2019 2019/1

BASIC RATE **No Profit & Overhead**
5 **PRIME MOVERS, TRACTORS, LOW BED TRAILERS ETC.**

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
B0-131	Prime Mover	Old	115.37	170.78	2,538.23	3,757.23	108.04	163.45	2,376.98	3,595.98
B0-131A	Prime Mover	New for 30 T Trailer	215.42	270.83	4,739.18	5,958.18	198.21	253.62	4,360.56	5,579.56
	Prime Mover Chinese	50 Ton	394.94	450.35	8,688.67	9,907.67	362.21	417.62	7,968.67	9,187.67
	Farm Tractor	Prime Mover only	27.16	46.00	488.80	828.00	26.23	45.07	472.08	811.28
	Farm Tractor	Prime Mover only	25.23	44.07	454.11	793.31	24.60	43.44	442.81	782.01
B0-117	Farm Tractor	with 3 T Trailer	28.62	47.46	477.46	816.66	27.52	46.36	456.64	795.84
B0-150	Farm Tractor	with Fuel/water Bowser	26.66	45.50	477.83	817.03	25.52	44.37	456.45	795.65
B0-152	Farm Tractor	with Emulsion Bowser	27.24	46.09	488.13	827.33	25.79	44.64	462.04	801.24
B0-122	Farm Tractor	with Broom	60.71	79.55	1,119.26	1,458.46	50.72	69.57	920.75	1,259.95
	Ind. Tractor	With Broom & Sprayer	66.36	89.46	1,194.50	1,610.34	61.86	84.96	1,113.50	1,529.34
	Farm Tractor Chinese	Small Tractor & Broom	47.63	59.99	857.27	1,079.87	41.79	54.16	752.27	974.87
	LowBedTrailer	20 Ton	41.95	41.95	838.91	838.91	38.36	38.36	767.26	767.26
B0-130A	LowBedTrailer	30 Ton	57.85	57.85	1,156.95	1,156.95	53.64	53.64	1,072.84	1,072.84
	LowBedTrailer	50 Ton	62.92	62.92	1,258.33	1,258.33	58.24	58.24	1,164.88	1,164.88
	LowBedTrailer	Rear Stearing- 30 ton	146.60	146.60	2,932.10	2,932.10	133.05	133.05	2,661.09	2,661.09
	LowBedTrailer	40 T local mfd 2010	184.05	184.10	3,680.92	3,681.92	166.97	167.02	3,339.45	3,340.45
	LowBedTrailer Chin.	50 Ton LB	240.95	240.95	4,818.93	4,818.93	218.52	218.52	4,370.37	4,370.37
	HighBedTrailer	25 Ton	44.75	44.75	894.95	894.95	41.48	41.48	829.53	829.53
	Trailer	3.5 Ton Tractor	3.39	3.39	67.84	67.84	2.92	2.92	58.32	58.32
	Dump Trailer	30 Ton	306.38	383.47	6,740.33	8,436.33	280.81	357.90	6,177.83	7,873.83
	Broom	Attachment only	35.48	35.48	709.64	709.64	26.12	26.12	522.43	522.43
	Fuel Tank	Storage 5,000 ltr			62.43	62.43			54.72	54.72

ANNEX-1

ROAD DEVELOPMENT AUTHORITY
SCHEDULE OF HIRE CHARGES FOR MACHINERY AND EQUIPMENT-2019
WITH EFFECT FROM 01ST JANUARY 2019

K=70.00 P=140.00 D=111.00
 Mechanical Division RDA 2019 2019/1

BASIC RATE **No Profit & Overhead**
6 **EARTH MOVING EQUIPMENT**

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
B0-115	Loader	2 WD Backhoe			2,289.03	3,306.63			2,054.43	3,072.03
	Loader	4WD Backhoe			2,447.51	3,465.11			2,186.15	3,203.75
	Loader Chinese	4WD Backhoe			9,997.69	11,015.29			8,693.05	9,710.65
	Loader	4WD Ext. Arm Backhoe			2,528.69	3,546.29			2,252.00	3,269.60
	Loader	Wheel 1.2 Cu.m			2,289.27	3,306.87			2,076.38	3,093.98
B0-116	Loader	Wheel 1.4			2,572.11	3,716.91			2,327.81	3,472.61
B0-116A	Loader	Wheel 1.7 Cu.m			2,937.22	4,463.62			2,665.00	4,191.40
	Loader Chinese	Wheel 1.7 Cu.m			5,892.47	7,418.87			5,255.47	6,781.87
B0-124A	Loader	Wheel 2.0-2.3 Cu.m			3,707.70	5,539.38			3,321.12	5,152.80
B0-124	Loader	Wheel 2.7-3.1 Cu.m			4,421.82	6,329.82			3,968.12	5,876.12
	Loader Chinese	Wheel 2.7-3.1 Cu.m			9,179.21	11,087.21			8,139.21	10,047.21
	Loader	Wheel 2.7 Cu.m Rock bkt			4,930.68	6,838.68			4,407.18	6,315.18
	Skid Loader Chinese	With out broom attachment			2,661.67	3,933.67			2,381.67	3,653.67
	SkidLoaderBroom Chine	with broom attachment			2,791.43	4,063.43			2,491.43	3,763.43
	Loader	Wheel 1.2 with Broom			2,810.54	4,082.54			2,513.38	3,785.38
B0-113	Moter Grader	65 HP			2,407.59	3,425.19			2,215.59	3,233.19
B0-114	Moter Grader	120-140 HP			4,634.95	7,140.79			4,259.35	6,765.19
	Moter Grader Chinese	160 HP			17,079.03	19,584.87			15,273.03	17,778.87
B0-154	Tractor	Crawler, 80-100 HP			2,875.24	4,617.88			2,527.24	4,269.88
	Tractor Chinese	Crawler, 80-100 HP YTO			5,470.24	7,212.88			4,629.04	6,371.68
	Tractor	Crawler, 180-200 HP			5,277.86	8,228.90			4,570.46	7,521.50
	Tractor	Crawler, above 300 HP			7,194.68	11,608.52			6,240.68	10,654.52
	Excavator	Crawler with Breaker			4,277.43	6,834.15			3,657.43	6,214.15
	Excavator Chinese	Crawler with Breaker			21,220.53	23,777.25			17,116.53	19,673.25
	Excavator	Crawler with Bucket			3,844.79	6,312.47			3,217.59	5,685.27
B0-155	Excavator	Mobile/ 0.4 Cum	337.70	439.48	5,208.13	6,798.13	321.44	435.01	4,500.13	6,090.13
	Excavator	Crawler/ 0.46CuM			3,576.23	5,039.03			2,952.23	4,415.03
	Excavator Chinese	Crawler130 KW Longarm			13,478.33	14,941.13			10,470.33	11,933.13

7 CRUSHERS, AIR COMPRESSERS, DRILLS, GRINDERS, WELDING PLANT ETC.

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
	Granulator	8- 10 T/H			842.83	1,453.39			829.63	1,440.19
	Compressor	Air, 125 CFM			935.30	1,762.10			896.30	1,723.10
	Compressor	Air, 175 CFM			1,132.33	2,175.37			1,077.08	2,120.12
B0-156	Compressor	Air, 250 CFM			1,372.98	2,619.54			1,297.08	2,543.64
	Compressor Chinese	Air, 250 CFM			2,520.47	3,767.03			2,345.47	3,592.03
	Compressor	Air, 300-360 CFM			2,118.77	3,835.97			1,964.77	3,681.97
	Compressor	Air, 600 CFM			2,818.55	5,362.55			2,604.80	5,148.80
	Compressor Chinese	Air, 600 CFM			7,320.40	9,864.40			6,508.40	9,052.40
B0-144	Compressor	Air, 750 CFM			3,499.69	6,743.29			3,233.69	6,477.29
B0-143	Track Drill	Crawler			1,808.50	1,808.50			1,508.50	1,508.50
B0-158	Rock Drill	Hand Held			296.17	296.17			277.17	277.17
B0-105	Welding Plant	Engine Driven			1,010.85	1,799.49			964.05	1,752.69
	Welding Plant Chinese	Engine Driven			2,129.72	2,918.36			1,969.72	2,758.36
	Transformer	Welding, Air Cooled			335.61	2,148.21			318.61	2,131.21
	Transformer	Welding, Oil Bath			304.24	1,844.95			298.24	1,838.95
	Grinder	Integral Bit			70.29	70.29			24.79	24.79
	Grinder	Cross Bit			62.12	62.12			35.52	35.52
	Exploder	Exploding Machine			64.68	64.68			21.28	21.28
	Tester	Continuity			12.73	12.73			8.33	8.33
	Loader	ANFO			575.22	575.22			537.22	537.22
	Magazine	Explosive			49.11	49.11			42.23	42.23

ANNEX-1

ROAD DEVELOPMENT AUTHORITY
SCHEDULE OF HIRE CHARGES FOR MACHINERY AND EQUIPMENT-2019
WITH EFFECT FROM 01ST JANUARY 2019

K=70.00 P=140.00 D=111.00
 Mechanical Division RDA 2019 2019/1

BASIC RATE
8 **No Profit & Overhead**
WATER PUMPS

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
B0-133A	Pump	Clear Water 2 inch			94.19	269.19			74.09	249.09
	Pump	Clear Water 3 inch			191.95	668.95			161.80	638.80
B0-133	Pump	Clear Water 4 inch			502.69	1,191.69			457.13	1,146.13
	Pump	Clear Water 6 inch			781.38	1,708.88			700.98	1,628.48
	Pump	Sludge 3inch			681.96	1,233.16			591.51	1,142.71
B0-134	Pump	Sludge 4 inch			820.66	1,594.46			710.11	1,483.91
	Pump	Sludge 6 inch			955.32	1,877.52			783.80	1,706.00

9 **TESTING EQUIPMENT**

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
	Hammer	Sheet pile			153.95	153.95			97.70	97.70
	Extractor	Sheet pile			124.16	124.16			80.16	80.16
	Hammer	Vibro - Electric			4,050.96	4,050.96			3,350.96	3,350.96
	Hammer	Pneumatic			2,129.09	2,129.09			1,769.09	1,769.09
B0-157	Demolisher	Pneumatic			63.33	63.33			43.57	43.57
	Equipment	Sand Blasting			79.72	79.72			31.62	31.62
	Hammer	Pneumatic chipping			27.12	27.12			19.56	19.56
	Machine	Shot Creating/Dry Spray			1,308.92	1,308.92			1,120.42	1,120.42
	Machine	Metal Cleaning/Spraying			883.76	883.76			703.76	703.76

10 **ROAD CONSTRUCTION MACHINES**

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
B0-132	Baby Dumper	0.75 Cub			636.82	1,272.82			605.62	1,241.62
B0-140	Distributor	Bitumen 750 Ltr			900.47	1,701.83			858.22	1,659.58
B0-137	Trolley	Emulsion			114.77	114.77			89.69	89.69
B0-138	Sprayer	Emulsion			441.51	823.11			373.13	754.73
	Sprayer Hand Cart Chine	Emulsion			447.93	829.53			373.13	754.73
B0-129A	Asphalt Paver	Wheel			6,891.97	8,761.35			6,198.22	8,067.60
B0-129	Asphalt Paver	Crawler			5,702.33	7,883.88			4,922.33	7,103.88
	Asphalt Paver Chinese	Wheel			11,247.16	13,116.54			10,221.39	12,090.77
	Asphalt Paver Chinese	Crawler			9,180.02	11,361.57			7,963.28	10,144.83
B0-121	Chip-spreder	Propelled			3,703.36	5,318.80			3,442.11	5,057.55
	Chip-spreder	Propelled			5,208.60	7,120.84			4,669.60	6,581.84
B0-121A	Chip-spreder (Towed)	2.5 m width			316.69	316.69			277.32	277.32
	Tar Kettle	Towed			74.44	74.44			38.19	38.19
B0-139	Road-Marker	Hand-Cart, Gas/Heater			1,121.86	1,628.46			911.86	1,418.46
	Road-Marker	MFD2011			872.06	1,378.66			744.56	1,251.16
	Chip Sealer Chinese	Dagon	518.75	547.99	33,200.02	35,787.02	472.78	502.93	30,257.71	32,844.71
B0-145	Slurry Sealing	Machine Weisig 50M	176.49	206.07	11,295.53	13,457.93	151.30	181.38	9,683.03	11,845.43
	Distributor/ Sprayer	Hot Bitumen 4500 ltr	114.03	150.47	3,978.05	4,852.55	97.57	134.01	3,583.11	4,457.61
	Sprayer Chinese	Hot Bitumen 6000L	503.10	536.23	17,234.20	18,029.20	415.60	448.73	15,134.20	15,929.20
B0-123	Sprayer	Emulsion- 4000 ltr	65.84	90.82	2,631.24	3,330.84	53.45	78.43	2,284.24	2,983.84
	Road milling machine	W2000 2.0 m (430 kW)	643.55	719.80	41,187.24	47,007.24	571.44	649.13	36,571.86	42,391.86
	Road sweeper	3.4 m width (130kW)	635.41	688.41	19,062.24	20,652.24	628.48	681.48	18,854.54	20,444.54

ANNEX-1

ROAD DEVELOPMENT AUTHORITY
SCHEDULE OF HIRE CHARGES FOR MACHINERY AND EQUIPMENT-2019
WITH EFFECT FROM 01ST JANUARY 2019

K=70.00 P=140.00 D=111.00
 Mechanical Division RDA 2019 2019/1

BASIC RATE **No Profit & Overhead**
11 **ELECTRIC GENERATORS**

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
	Generator	Electric 7 - 10 KVA			297.63	933.63			280.08	916.08
	Generator	Electric 10 KVA			436.12	1,250.20			401.62	1,215.70
	Generator	Electric 50 KVA			868.20	1,981.20			819.45	1,932.45
	Generator Chinese	Electric 420 KW			4,910.99	11,270.99			4,437.45	10,797.45
	Lighting Set	Flood Trolley mtd. 9 KVA			1,043.77	2,124.97			964.67	2,045.87

12 **CRANES, FORK LIFT**

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
	Crane	Crawler , 25 Ton			3,623.60	5,060.96			3,113.60	4,550.96
	Crane	Crawler , 35 Ton			4,256.96	5,846.96			3,626.96	5,216.96
	Drag line	Crawler , 35 T Crane Modified			6,103.27	7,947.67			5,113.27	6,957.67
	Crane	Crawler , 45 Ton			8,240.65	11,471.53			6,860.65	10,091.53
B0-146	Crane	Mobile, 25 Ton	269.12	381.86	5,920.57	8,400.97	236.39	349.13	5,200.57	7,680.97
	Crane Hydraulic Chin.	Mobile 50 Ton	1,267.29	1,455.73	22,811.14	26,203.14	1,118.57	1,307.01	20,134.22	23,526.22
B0-146A	Crane	Mobile 30 Ton	437.79	589.72	7,880.20	10,615.00	381.12	533.06	6,860.20	9,595.00
	Crain	Mobile, 45 Ton	1,043.17	1,261.80	16,690.77	20,188.77	915.67	1,134.30	14,650.77	18,148.77
	Fork Lift	Truck, 5 Ton	83.67	136.05	1,422.39	2,312.79	71.91	124.28	1,222.39	2,112.79
	Fork Lift	Truck, 3 Ton	49.40	76.18	938.69	1,447.49	43.30	70.08	822.69	1,331.49

13 **FERRY BOATS & PASSENGER LAUNCHES**

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
	Launch	200 Passenger, wooden			4,122.67	6,590.35			3,210.67	5,678.35
	Launch	200 Passenger, steel			7,299.74	9,665.66			5,319.74	7,685.66
	Launch	100 Passenger, steel (Vadatharakal)			24,782.82	27,148.74			17,132.82	19,498.74
	Ferry c/w OBM	10 Ton			1,723.56	2,672.76			1,447.56	2,396.76
	Ferry with IBM	85 Ton			85,871.45	90,323.45			64,721.45	69,173.45

ANNEX-1

ROAD DEVELOPMENT AUTHORITY
SCHEDULE OF HIRE CHARGES FOR MACHINERY AND EQUIPMENT-2019
WITH EFFECT FROM 01ST JANUARY 2019

K=70.00 P=140.00 D=111.00
 Mechanical Division RDA 2019 2019/1

BASIC RATE **No Profit & Overhead**
14 **CONCRETING EQUIPMENT & PRODUCTION PLANT**

HSR CODE	PLANT		HIRE Per KM Rs.		HIRE Per Hour Rs.		Hire Per KM Without Repl. Cost Rs		Hire Per Hour Without Repl. Cost Rs	
	DESCRIPTION	CAPACITY	DRY	WET	DRY	WET	DRY	WET	DRY	WET
	ConcreteMixer	200 Ltr (10/7)			423.18	779.34			396.18	752.34
B0-102	ConcreteMixer	400 Ltr (14/10)			484.85	917.33			444.05	876.53
	ConcreteMixer	14/10 Self Loading			602.97	1,111.77			539.97	1,048.77
B0-136	ConcreteMixer	14/10 S/L, weigh Batching			969.13	1,503.37			875.33	1,409.57
	Vibrator Exter	Electric External			414.37	833.95			406.53	826.11
	Generator	Frequency for vibrator			517.63	1,286.86			498.43	1,267.66
	Converter	Frequency			682.12	1,619.18			649.12	1,586.18
	Asphalt Plant	Portable 14/10,21/14			610.17	1,080.81			566.37	1,037.01
B0-147	Asphalt Plant	Hot , Complex 60 TPH			16,340.27	20,792.27			11,445.27	15,897.27
	Asphalt Plant Chinese	Hot , Complex 60 TPH			17,151.62	21,497.62			12,074.70	16,420.70
	Asphalt Plant Chinese	Hot , Complex 80/100 TPH			26,467.61	30,813.61			18,180.68	22,526.68
	Cold Mix Plant	Complex 15 TPH			4,927.94	6,899.54			3,882.94	5,854.54
B0-147A	Cold Mix Plant	Complex 30 TPH			8,114.29	10,721.89			5,774.29	8,381.89
	Emulsion Plant	Complex 10 tph			15,396.76	16,986.76			10,896.76	12,486.76
	Emulsion Plant	Complex 5thp			7,393.01	8,474.21			5,293.01	6,374.21
	Decanting Plant Chin.	Dagon			7,848.44	8,537.44			6,579.21	7,268.21
	Decanting Plant Chin.	DT8			9,512.43	10,201.43			7,901.08	8,590.08
	Boring	Deep Foundation			3,903.76	4,603.36			3,273.76	3,973.36
	Boring	Shallow Foundation			2,637.13	3,336.73			2,325.13	3,024.73
	Crusher	Stone 200 T/H Complex			46,624.22	51,076.22			43,880.22	48,332.22
	Crusher	Stone 100 T/H Complex			13,552.68	16,096.68			13,012.68	15,556.68
	Crusher Chinese	Stone 100 T/H Complex			48,997.44	51,541.44			44,931.63	47,475.63
	Crusher	Stone50-75T/H Complex			12,306.75	14,596.35			11,826.75	14,116.35
B0-142	Crusher	Stone 40 T/H Complex			9,389.63	11,552.03			9,039.63	11,202.03
	Crusher	Stone 25 T/H Complex			6,921.32	8,892.92			6,671.32	8,642.92
	Weigh Bridge	Shanghai Henqui			522.03	656.43			286.03	420.43

ANNEX-1

**SPECIFICATIONS RELATED TO THE HSR ITEMS
HSR-2019**

1. EARTHWORKS:**a) Embankment Construction- SSCM section 304:**Type I material MDD \geq 1600kg/m³Type II material MDD \geq 1500kg/m³**HSR items : EW1-011, EW1-014****b) Soil for road shoulders and gravel surfacing- SSCM section 409 & 601:**

Table 1708-1

Sieve size mm	Percentage passing
37.5	100
20	77 -100
5	41 -100
2.36	30 - 80
0.6	18 - 50
0.075	05 - 25

Table 1708-2 - Consistency limits for road shoulder materials and gravel surfacings.

Climatic Zone	LL	PI
Wet zone	<55	4 -25
Dry Zone	< 55	6 - 25

c) Sub Base :CBR \geq 20%LL \leq 40PI \leq 15**HSR items : EW1-001, EW1-013****2. Aggregates :****a) Single size aggregate bases - 50, 37.5, 19, & 12.5 mm - SSCM section 403 :**

Table 1701-4

Sieve Size mm	Percentage passing			
	Nominal size in mm			
	50	37.5	19	12.5
63	100	-	-	-
50	85 - 100	100	-	-
37.5	0 - 30	85 - 100	-	-
28	0 - 7	0 - 30	100	-
20	0 - 2	0 - 7	85 - 100	100
14	-	0 - 2	0 - 35	85 - 100
10	-	-	0 - 7	0 - 35
5	-	-	-	0 - 5
2.36	-	-	0 - 2	0 - 2

AIV \leq 30%FI \leq 35%**HSR items : M1-004, M1-007, M1-008, M1-009, A1-005 TO A1-012**

SPECIFICATIONS RELATED TO THE HSR ITEMS

HSR-2019

b) Water bound macadam and Dry bound macadam - SSCM section 404 :
(50 or 63 mm and crusher fines)

Table 1701-6

Sieve Size mm	Percentage passing		
	Nominal max size of agg in mm		Crusher fines
	63	50	
75	100	-	-
63	90 - 100	100.0	-
50	30 - 70	90 - 100	-
37.5	0 - 15	30 - 70	-
28	-	0 - 15	-
20	0 - 5	-	-
14	-	0 - 5	-
10	-	-	100.0
5	-	-	85 - 100
0.150	-	-	10 - 30

AIV <= 30%

FI <= 35%

HSR items : M1-010, M1-011

c) Penetration macadam base - SSCM section 406 :

Table 1701-7

Sieve Size mm	Percentage passing			
	Nominal size in mm			
	50	37.5	20	14
63	100	-	-	-
50	-	100	-	-
37.5	50-73	-	-	-
28	-	46-72	100	-
20	7-26	-	52-68	100
14	-	7-27	-	63-88
10	-	-	7-25	-
5	-	-	-	6-35
2.36	0-3	0-3	0-3	0-3
1.18	-	-	-	-

AIV <= 30%

FI <= 35%

HSR items : S1-037, S1-038

d) Dense Graded Aggregate Bases : SSCM section 405

(ABC construction)

Table 1701-5

Sieve Size mm	Percentage passing		
	Nominal size in mm		
	37.5	28	20
50	100	-	-
37.5	95-100	100	-
28	-	-	100
20	60-80	70-85	90-100
10	40-60	50-65	60-75
5	25-40	35-55	40-60
2.36	15-30	25-40	30-45
0.425	7-19	12-24	13-27
0.75	5-12	5-12	5-12

AIV <= 30%

FI <= 35%

CBR >=80%

HSR items : M1-012, M1-013

e) Aggregate grading, binder content and thickness requirements - SSCM section 407 :

**SPECIFICATIONS RELATED TO THE HSR ITEMS
HSR-2019**

Table 407-1

Mix Classification no.	1	2	3	4
Nominal maximum size of aggregate in mm	37.5	37.5	19	19
Course	Dense graded	Open graded	Dense graded	Open graded
Thickness mm - Max	100	100	50	40
- Min	60	60	30	30
Sieve size mm	Total % by weight passing			
50	100	100	-	-
37.5	95 -100	95 -100	-	-
28	80-95	53-75	100	100
20	-	-	80-98	96-100
14.0	62-77	10-27	-	50-75
10.0	-	-	49-67	22-42
5.00	-	-	29-44	-
2.36	30 - 45	0 - 10	18-30	5 - 20
1.180	-	-	13-24	0-2
300	-	-	5-14	-
Percent binder content by total weight of mix	3.0 - 4.0	2.5 - 3.5	3.5-4.5	3.0 - 4.0

AIV <= 30%

FI <= 35%

HSR items : **B0-362, S1-032****3 Surfacing :****a) Asphalt concrete - SSCM section 506 :**

Table 506-1

Mix Classification No. Course	Binder Course	Wearing Course Type - 1	Wearing Course Type - 2
Thickness mm - Max	75	75	75
Min	35	35	35
Sieve size mm	Total % by weight passing including filler if used		
28	100	100	-
20	90-100	85-100	100
14.00	-	-	82-92
10.0	56-82	66-94	61-81
5.00	36-58	46-74	41-66
2.36	21-38	35-58	27-48
1.18	15-32	26-48	20-40
0.600	10-26	18 - 38	15-35
0.300	6-20	11-28	10-25
0.150	3-13	07-20	7-17
0.075	1-7	3-12	5-9
Percent binder content by total weight of mix	3.5 - 4.5	4.0-6.5	4.0-6.0

AIV <= 30%

FI <= 35%

LAAV <= 40%

HSR items : **B0-361, S1-031, B0-362A****b) Seal Coat treatments (Surface dressing) - SSCM section 505 :**

**SPECIFICATIONS RELATED TO THE HSR ITEMS
HSR-2019**

Table 1701-8

Sieve Size	Percentage passing			
	Nominal size in mm			
mm	19	12.5	9.5	6.3
25	100	-	-	-
19	85 - 100	100	-	-
12.5	0 - 25	85 - 100	100	-
9.5	0 - 7	0 - 25	85 - 100	100
6.3	-	-	0 - 25	85 - 100
4.75	-	0 - 7	0 - 10	-
2.36	0 - 2	0 - 2	0 - 2	0 - 10
0.075	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5

AIV <= 30%

FI <= 35%

LAAV <= 40%

HSR items : S1-003, S1-004, S1-005, S1-006, S1-029, S1-030

c) Cold mix surfacings - SSCM section 507 :

Table 507.1

Grading type Nominal max size of aggregate	Dense graded		Open graded	
	19 mm	12.5 mm	19 mm	12.5 mm
Sieve size mm	Total percentage passing by weight			
25	100	-	100	-
19	90 - 100	100	90 - 100	100
12.5	-	90 - 100	60 - 80	85 - 100
9.5	56 - 80	-	-	-
4.75	35 - 65	44 - 74	18 - 35	35 - 50
2.36	23 - 49	28 - 56	-	15 - 30
0.300	05 - 20	05 - 22	-	-
0.075	0 - 05	0 - 08	0 - 03	0 - 03
Percent binder as % of wgt of Aggregate				
(a) Cutback Bitumen	4.5 - 5.5	5.0 - 6.0	4.5 - 5.0	4.5 - 5.0
(b) Emulsion	5.0 - 6.0	5.5 - 6.5	4.5 - 5.5	5.0 - 6.0

AIV <= 30%

FI <= 35%

LAAV < 40%

HSR items : B0-365, B0-366, S1-033, S1-033A

4. Binder for Surface applications

a) Prime coat - CSS-1 emulsion - SSCM section 1702.3 : shall conform to ASTM D2397-98

Cutback bitumen(20-45%) or MC-30, MC-70 or MC-250 or MC-800 : SSCM section 1702.2

HSR items : B0-352, S1-022, S1- 023, S1-024, S1-025

b) Sand seal - CRS-1 emulsion - SSCM section 1702.3 : **HSR items :** B0-353, S1-011, S1-012, S1-013,
Tack coat - shall conform to ASTM D2397-98 **S1-014, S1-027, S1-035, S1-036**

Cutback bitumen (8 - 12%) - SSCM section 1702.2

Bitumen 80 - 100 penetration grade bitumen - SSCM section 1702.1

c) Surface dressing - CRS-2 emulsion - SSCM section 1702.3

Residue on distillation minimum 65% shall conform to ASTM D2397-98

Viscosity min. 100 Saybolt furol seconds

HSR items : B0-354, S1-029, S1-030

Formula for Earth excavation using machinery for HSR-2019											
Dozer HP and Blade Dimensions received from DGM(mech)/RC&DC											
A. Excavation :		Unit		D4 - H		D4 - E		D7 - G		D8 -10	
i	Dozer type :			95		80		200		300	
	Horse power	HP		95		80		200		300	
	Hire charge for Dozer	Rs.	per Hour (wet)	4,617.88	4,617.88	4,617.88	4,617.88	8,228.90	8,228.90	11,608.52	11,608.52
ii Cutting Blade Details :											
	Length of Load(Blade length)	L	m	2.636	2.636	3.12	3.12	4.27	4.27	4.965	4.965
	Blade height	H	m	1.085	1.085	1	1	0.97	0.97	1.174	1.174
iii Assumptions :											
	Slope of cut *	S	ratio	2 :1							
	Width of Load	W=2XH	m	2.17	2.17	2	2	1.94	1.94	2.348	2.348
	Haul distance	D	m	30	60	30	60	30	60	30	60
	Average Forward speed		km/h	2.25	2.25	2.25	2.25	2.70	2.70	2.70	2.70
	Average time for forward push	=A	minutes	0.8	1.6	0.8	1.6	0.67	1.33	0.67	1.33
	Average Reverse speed		km/h	2.85	2.85	3.50	3.50	3.50	3.50	2.50	2.50
	Average time for return	=B	minutes	0.63	1.26	0.51	1.03	0.51	1.03	0.72	1.44
	Ave. time loading and changing Gears	=C	minutes per cycle	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
	Efficiency of Operater	E	%	75	75	75	75	75	75	75	75
	Break for rest in each hour	R	minutes	10	10	10	10	10	10	10	10
	Average cycle time for Pushing,										
	Returning, Changing gears etc.	T=(A+B+C)	minutes	1.78	3.21	1.66	2.98	1.53	2.71	1.74	3.12
	Bulking factor	B	%	15	15	15	15	15	15	15	15
iv Moldboard capacity :											
	Volume(Bank) of Cut (LxHxW)/S		cu.m(bank)	3.10	3.10	3.12	3.12	4.02	4.02	6.84	6.84
v	Net loose volume per cycle	V	cu.m(loose)	3.57	3.57	3.59	3.59	4.62	4.62	7.87	7.87
	Probable cycle output per hour										
	Cycle output per Hour C=((60-R)/T)xV/100		cycles/Hr	21.07	11.68	22.59	12.58	24.51	13.84	21.55	12.02
vi	Net loose volume per hour	v=CxV	cu.m(bulked)	75.22	41.7	81.1	45.16	113.24	63.94	169.6	94.6
	Net loose volume per day (5 hours)			376.1	208.5	405.5	225.8	566.2	319.7	848	473
	Considering the time for Servicing,										
	Fuelling & Cleaning as		hours/day	1	1	1	1	1	1	1	1
	Working time	t	hours/day	6	6	6	6	6	6	6	6
	Output per 6 Hours	=txV	cu.m per day	451.32	250.2	486.6	270.96	679.44	383.64	1017.6	567.6
vii	Average cost per Cu.m Loose		Rs.	61.39	110.74	56.94	102.26	72.67	128.70	68.45	122.71
	Average for each dozer			86.07		79.60		100.68		95.58	
B. Loading :											
i	Hire Charge for wheel loader 2.7 cu.m		hour(wet)	6,329.82		B0-124					
	One way haul distance up to :	d	m	10							
	The Maximum time for loading cycle	t	minutes	1.2							
	Capacity of loader bucket	v	cu.m	2.7							
	Assume working time per hour	T	minutes	50							
	Assume loading bucket efficiency	E		0.8							
	Assume machine operator efficiency	e		0.75							
ii	No of loads per hour	n		41.66667		[(T/t)					
iii	Loading capacity per hour	V	cu.m	67.5		[v x n x e x E]					
	Assume 5 hours working for loader due to										
	Queuing and delays in transport vehicles		hours	5							
iv	Out put per day (Loose)		cu.m	337.5							
v	Cost of loading per Cu.m (Loose)		Rs.	93.78		per cu.m					
	Sub Total cost of excavation & loading			179.84		173.37		194.46		189.35	
C. For excavation of Base, Sub Base & Shoulder materials :											
	Allow for borrow pit establishment and										
	site maintenance %		25								
D. For excavation of Embankment fill materials :											
	Allow for borrow pit establishment and										
	site maintenance %		10								
Total cost of excavation and supply of Soil for											
	Sub Bases, Bases and Shoulders	Cu.m(loose)		224.80		216.72		243.07		236.69	
	Embankment fill material	Cu.m(loose)		197.83		190.71		213.90		208.29	
	Sub Bases, Bases and Shoulders, Average	total cost		230.32	per cu.m	Excluding overheads					
	Embankment fill material, Average	total cost		202.68	per cu.m	Excluding overheads					
	Say, For Bases, Sub Bases and Shoulders	Rate Rs.		230.30	per cu.m	651.81	per cube	B0-201			
	Say, For Embankment filling	Rate Rs.		202.70	per cu.m	573.59	per cube	B0-202			
		with 28%		294.78	per cu.m	834.24	per cube				
				259.46	per cu.m	734.26	per cube				

Cu.m Transport cost on KM distance involving small quantities

Cost of Transport from 0.5 km up to 1 km per cu.m	(T1-003)	280.00
Rate for each subsequent km from 1 km up to 8th km	(T1-003A)	43.55
Rate for each subsequent km beyond 8th km	(T1-003B)	29.25

Distance	Distance/km	Cost/Cu.m/Trip Rs.	Distance/km	Cost/Cu.m/Trip Rs.
0.5 Up to	1	280.00	43	1,608.60
	2	323.55	44	1,637.85
	3	367.10	45	1,667.10
	4	410.65	46	1,696.35
	5	454.20	47	1,725.60
	6	497.75	48	1,754.85
	7	541.30	49	1,784.10
	8	584.85	50	1,813.35
	9	614.10	51	1,842.60
	10	643.35	52	1,871.85
	11	672.60	54	1,930.35
	12	701.85	56	1,988.85
	13	731.10	58	2,047.35
	14	760.35	60	2,105.85
	15	789.60	62	2,164.35
	16	818.85	64	2,222.85
	17	848.10	66	2,281.35
	18	877.35	68	2,339.85
	19	906.60	70	2,398.35
	20	935.85	72	2,456.85
	21	965.10	74	2,515.35
	22	994.35	76	2,573.85
	23	1,023.60	78	2,632.35
	24	1,052.85	80	2,690.85
	25	1,082.10	82	2,749.35
	26	1,111.35	84	2,807.85
	27	1,140.60	86	2,866.35
	28	1,169.85	88	2,924.85
	29	1,199.10	90	2,983.35
	30	1,228.35	92	3,041.85
	31	1,257.60	94	3,100.35
	32	1,286.85	96	3,158.85
	33	1,316.10	98	3,217.35
	34	1,345.35	100	3,275.85
	35	1,374.60	102	3,334.35
	36	1,403.85		
	37	1,433.10		
	38	1,462.35		
	39	1,491.60		
	40	1,520.85		
	41	1,550.10		
	42	1,579.35		

ANNEX-V

Daily Labour Rates for year 2019 HSR

		Rate of pay	Interiam Allowances	Extra Work Allowance 15%	Cost Of Living	Matching Allowance	Budget Allowance 2015	Sub Total	12% EPF Rs	3% ETF Rs.	Total /Day Rs.	2019
1	UnSkilled Labour	739.53	104.76	56.86	260.00	81.50	76.13	1,318.78	158.25	39.56	1,516.60	1,650.00
2	Semi Skilled Labour	769.40	104.76	62.41	260.00	91.00	64.66	1,352.23	162.27	40.57	1,555.06	1,800.00
3	Skilled Labour "B"	785.53	104.76	66.54	260.00	98.00	58.50	1,373.33	164.80	41.20	1,579.33	2,200.00
4	Skilled Labour "A"	817.80	104.76	74.41	260.00	112.00	46.16	1,415.13	169.82	42.45	1,627.40	2,500.00

Transport and Paving of Interlocking Blocks-2019

1. **Transport of Interlocking Concrete Paving
Block per km transport (short distance - within the province)**

Transport cost (Rs.) . = 0.13 per Block/ km

2. **Paving of Interlocking Concrete Blocks.
inclusive 50 mm sand bedding and compaction. Supply and
transport of Blocks and bedding material to be paid separately.**
(Depending on the design, Construction of side kerbs and ABC layer
and sub grade preparation to be paid separately.)

**Total cost of paving of interlocking blocks
excluding the cost of side kerbs (Rs.)** . = 217.75 per Sq.m

HSR - 2019
Engineering Division
Ministry of Highways & Road Development
and Petroleum Resources Development